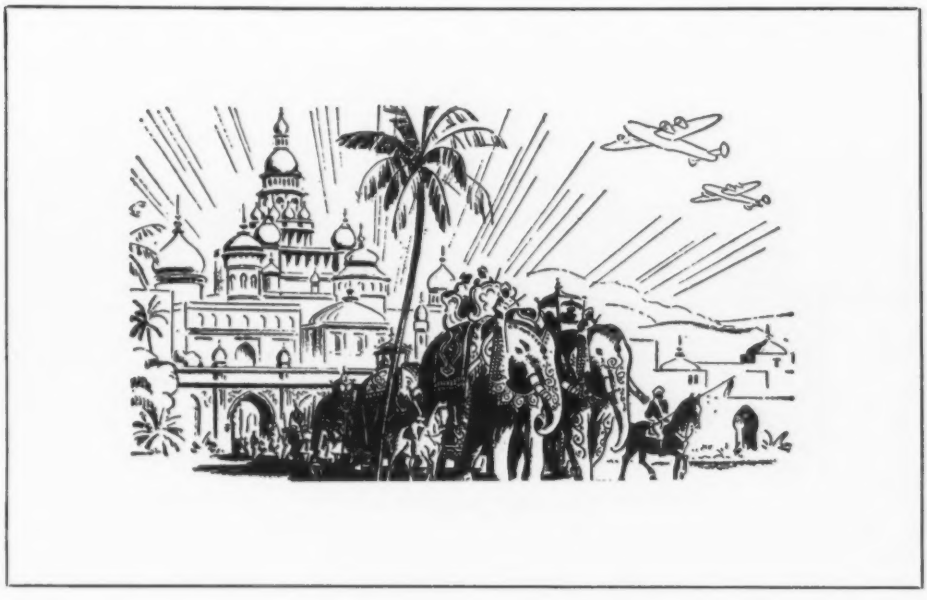
the American Perfumer and ESSENTIAL OIL REVIEW

FEBRUARY 1953

COSMETICS · SOAPS · FLAVORS



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VOLUME 61 NUMBER 2

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the American Perfumer and ESSENTIAL OIL REVIEW

COSMETICS · SOAPS · FLAVORS

Established 1906

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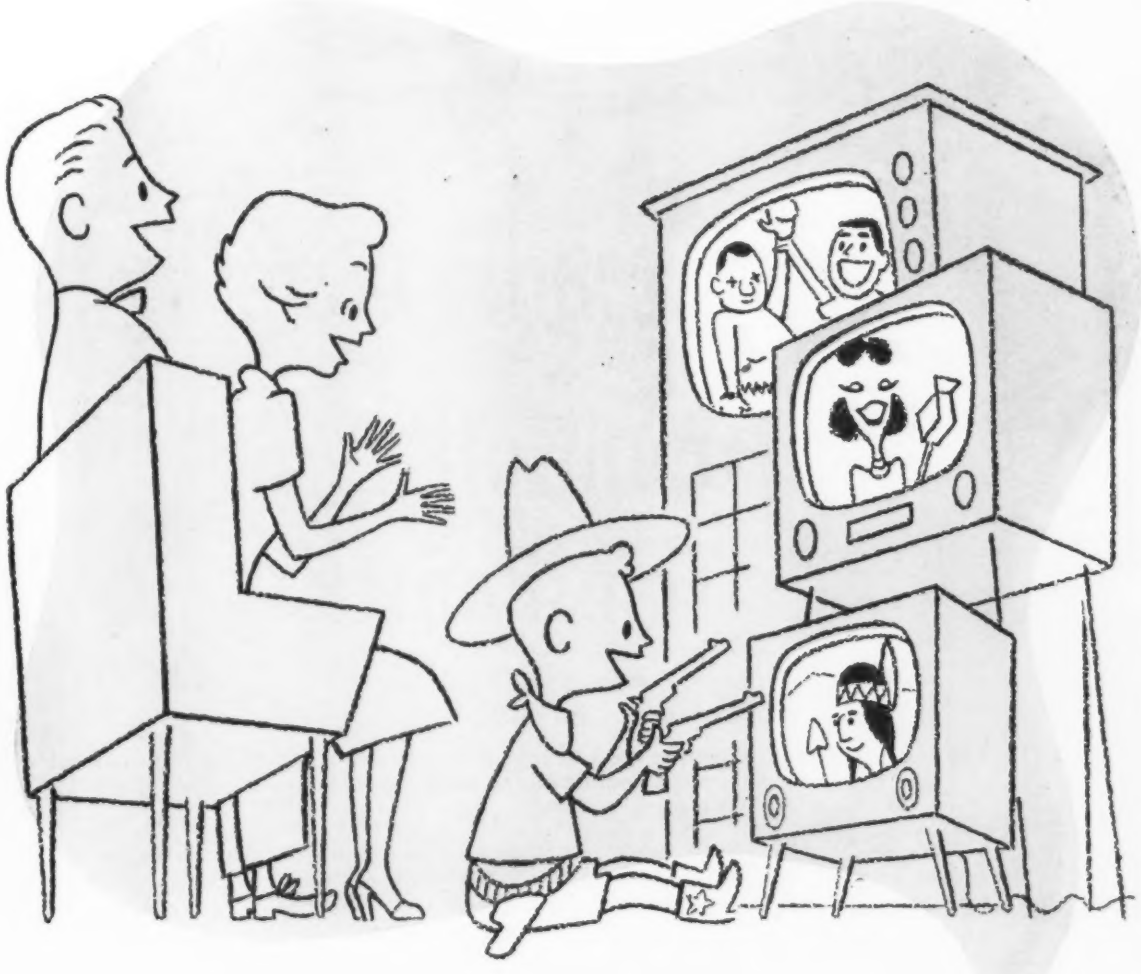

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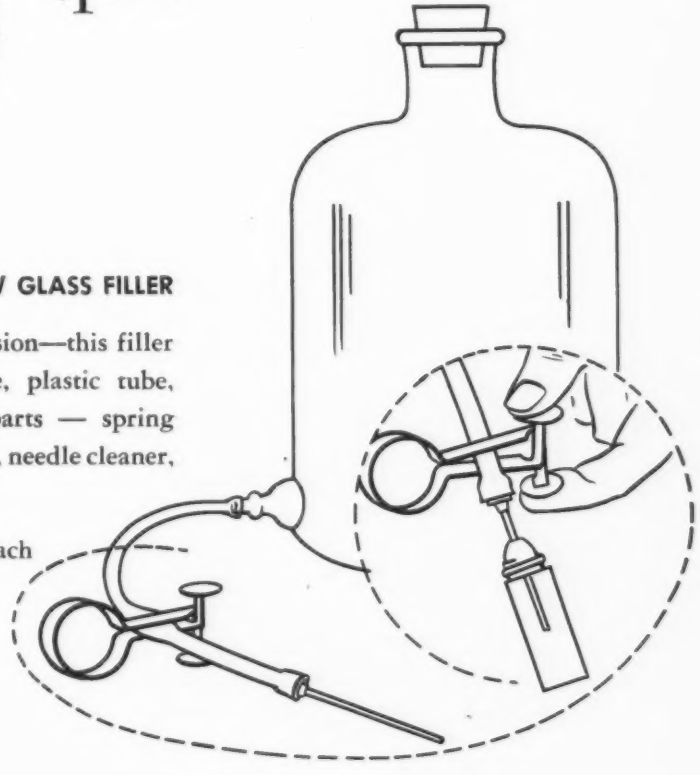

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COOPERATIVE EFFORTS *in the* FIELD OF SCIENCE

THE COSMETIC INDUSTRY has always recognized that the scientific background of its products is the ultimate basis of its success. The American Manufacturers of Toilet Articles, predecessor to The Toilet Goods Association, engaged in cooperative research work many years ago at Columbia University and other institutions of learning.

THE TOILET GOODS ASSOCIATION upon its inception established a Scientific Advisory committee, the personnel of which was recruited from the technical staffs of member companies. This committee's early work was largely responsible for the fact that the Federal Food, Drug and Cosmetic Act is both adequate and reasonable. The committee also performed yeoman service during the war in the development of substitutes for scarce materials, and it is largely due to its efforts that the industry was permitted to live and prosper during a period when many of its classic raw materials had to be diverted entirely to the national defense.

THE DREAM of adequate standards for cosmetic raw materials, sponsored as "Odorgraphia" by A.M.T.A. was revived by the T.G.A. The Scientific Advisory committee is constantly working on adequate standards for cosmetic raw materials. It has succeeded in producing more than 40 of such standards and most of them call for a higher degree of purity than is required by the U. S. Pharmacopoeia.

NATURALLY, this type of scientific work led to much research which should be published. As a result the Association formed its Scientific Section whose membership consists of upwards of 500 scientists engaged by member companies in research, control and production. The Section holds two meetings a year at which reports, papers and addresses of great scientific importance are presented. These are published immediately after each meeting in a technical magazine, "The Proceedings of the Scientific Section of the Toilet Goods Association". In the few years during which this magazine has been published, it has received world-wide recognition as undoubtedly the finest technical publication devoted entirely to the cosmetic field.

THE SCIENTIFIC activities of the T.G.A. are just beginning. Plans are under way for a broadened program of research for the entire industry. A project covering allergies, sensitivities and irritations, the results of which will soon be published, has already been sponsored at a leading university. Other similar projects are having careful consideration.

YOUR ASSOCIATION stands for scientific progress and will continue and broaden its scientific program, a program which can only result in better and better toilet goods for the benefit of a constantly expanding number of satisfied consumers.

THE TOILET GOODS ASSOCIATION, INC.
9 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.

Further advertisements in this series will present to the industry what we feel will be an interesting picture of your Association's activities. Please read them and get to know us better.

TOP NOTES by Fritzsche

FRITZSCHE BROTHERS INC

FRITZSCHE BROTHERS, INC

A THOUGHT for the Month:

"Nothing is waste of time if you use the experience wisely."

—AUGUSTE RODIN

FLOWER of the Month

February—Violet
or Primrose

March—Jonquil
or Daffodil

RECOMMENDATION of the Month

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There is considerable demand for a spice note of this type and at this price. Excellently suited to lotions and creams.

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COMPANY .....

ADDRESS .....

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- ☐ PINE E-332
- ☐ FOUGERE I-256
- ☐ RED ROSE K-215
- ☐ SPICE L-132
- ☐ JASMINE I-798

Check 3 only

IN certain laboratory control tests, accurate color comparisons made against standard control samples provide an important check on the examined product's purity and quality. For all practical purposes, the spectroscopic determination is the most efficient method of making such tests quickly and accurately. This test is one of the many checks used by our Control Laboratories in their daily examination of newly arrived lots of certain essential oils and other basic raw materials before their acceptance for stock. A small detail in itself, this along with all the other rigid FRITZSCHE practices enables us to maintain the reputation we have long held for perfume and flavor specialties of fine quality and distinction.

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Brothers, Inc.

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• MEMO •

To: MANUFACTURERS OF MEDICINAL PRODUCTS

From: FRITZSCHE BROTHERS, Inc.

Subject: FLAVOR PROBLEMS IN PHARMACEUTICAL PRODUCTS*

In an address* delivered before the Eastern Scientific Section of the American Pharmaceutical Association, Dr. E. H. Hamann, our Chief of Flavor Research, touched upon a few of the problems inherent in the flavoring of pharmaceutical products. Said he, in part:

"The vast field of new pharmaceuticals presents a formidable array of problems and each one defies a standard flavor recommendation and requires a tailor-made flavor which will suit its physical and chemical properties. The hydrogen ion concentration is not only a limiting factor for the type of flavor that can be used, but limits the use of such a flavor depending upon its constituents. Eriodictyon, for example, is incompatible with acids. In alkaline media, fruit syrups discolor and flavor is destroyed. Certain reactive groups such as aldehydes necessary in creating flavor are more or less rapidly affected by chemical changes. In alkaline media, cinnamon oil may lose the characteristic flavor and oils such as clove may cause discoloration of the finished product. In liquid preparations, precipitations may occur on storage, which a change in hydrogen ion concentration would rectify."

Obviously, these observations barely "scratch the surface" in suggesting the complexity of this problem and the conditions that must be met before a proper flavoring can be safely adopted and the product offered for nation-wide distribution and sale. The important thing for the manufacturer to bear in mind is that his flavor and palatability problems can be solved most economically and satisfactorily by taking full advantage of the specialized knowledge already available through reputable, long established sources of supply. As a leader in this field for over eighty years, our flavor laboratories have an incomparable background to draw upon. This specialized experience can be of material aid to you in your work.

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* For a copy of this address fill in and mail coupon below.

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Gentlemen: Please send us a copy of Dr. Hamann's paper: "Flavor Problems in Pharmaceutical Products."

Perhaps you can also offer us suggestions for ☐ masking the objectionable flavor or ☐ improving the palatability of one of our products which is in the form of: (Check) ☐ Capsule ☐ Tablet ☐ Liquid ☐ Emulsion. From a flavor standpoint, its most objectionable ingredient is:

.....

Vehicle used is: .....

Its pH is: .....

Average dosage is: .....

Name ..... Title .....

Company .....

Address .....

City ..... Zone ..... State .....

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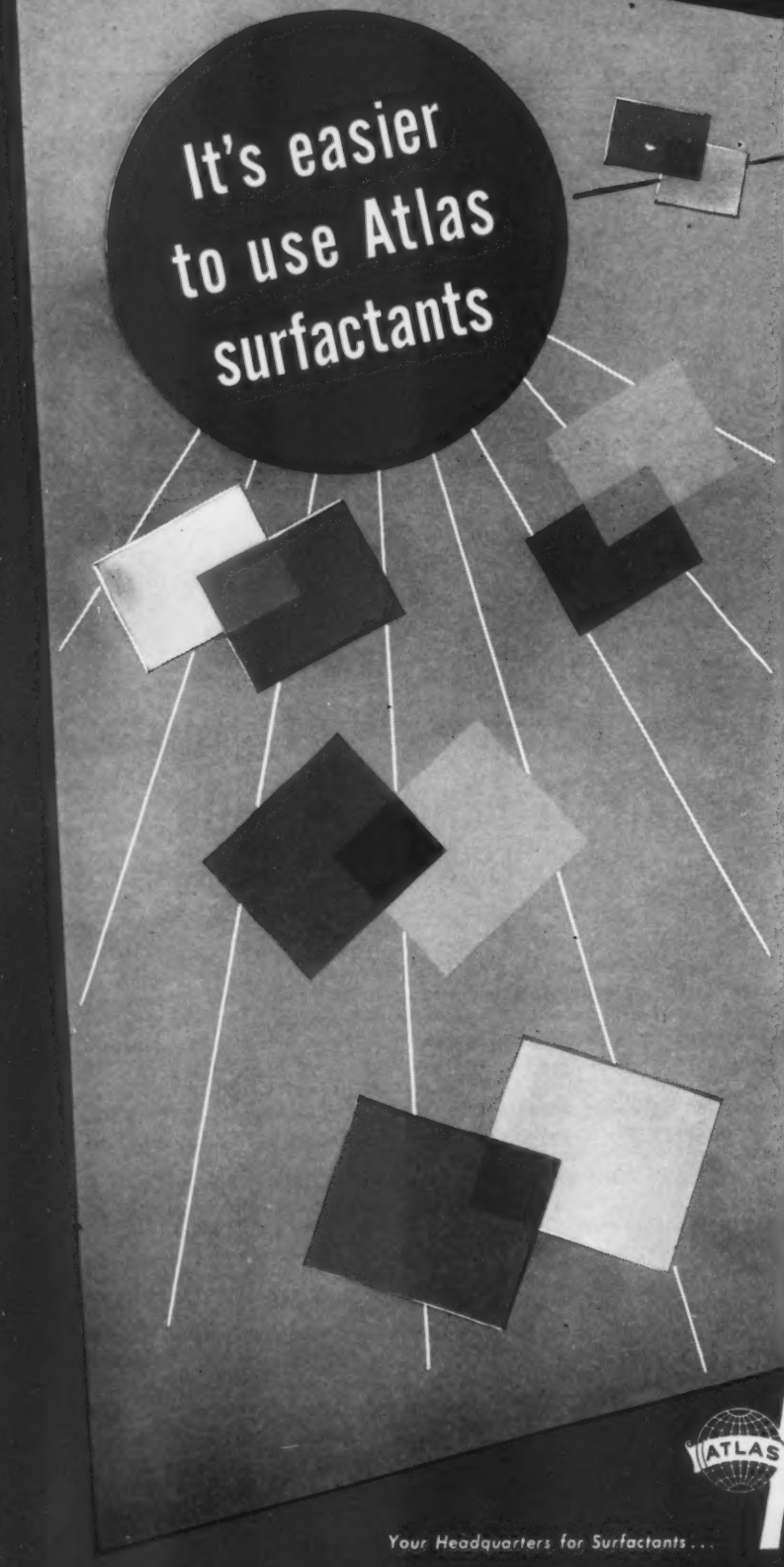

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by MAISON G. DENAVARRE, F.A.I.C.

M. G. deNavarre at work in his laboratory

Cosmetic Legislation

Again it seems like the chairman of the Delaney Committee and one or more members of that group are going to propose some new legislation on cosmetics. Representative Delaney's bill has been more or less anticipated as requiring a sort of "new drug application" for new cosmetics or new materials added to them. Soap is to be included.

Representative Miller's bill also intends to include soaps in his proposed legislation.

This may not seem far-reaching at the moment but it stands to reason that if soaps are to be considered cosmetics in a legislative sense it is only a question of how long before the Internal Revenue Department will also consider them cosmetics and levy a 20% tax. It would seem to this department that the cosmetic and soap interests should watch this aspect very closely.

It was quite a tassel to bring shampoo and related products into the clear on the tax picture and if the legislation above mentioned should be promulgated, these items are back in the soup.

Peroxide Bleach

A recent patent, U.S.2,599,977, has been granted to a British group which enables them to bleach wool without fibre damage by pretreatment with dilute solutions (0.75%) of mercury or nickel and 0.15% of copper, all calculated on the weight of the wool. They use two to six volume peroxide with a pH of between seven and 10.5 with an after treatment of sodium bisulfite.

The application of this idea in the bleaching of human hair may have some potential; certainly those interested in hair preparations of this type should investigate this treatment and should, therefore, consult the original patent which also gives the name of the patentee.

This is not to be construed as a suggestion to violate the patent above mentioned but as an application of the idea to another field and as a result the legal aspects should be carefully investigated.

Powder Mixing

The job of designating and mixing the bulking characters of powder material is one that has vexed everyone who comes in contact with them. More recently it has vexed some suppliers as well as users of such chemicals and to this end Butler and Ramsey have just finished reporting for the Combined Pharmaceutical Contact Committee a recommended method for determining the bulk density of same. The report is based on considerable study and the full report should be consulted (*Drug Standards 20*, 217, 1952) for the whole story. The procedure and the calculations in the report are as follows:

"Place about 100 ml. of sample in a U.S. Standard No. 20 Sieve and shake the sieve gently until only the balled up material remains on the screen. Receive the sifted sample on a sheet of glassine or other suitable paper. Avoid shaking, jolting or compressing the sifted powder in any way. Transfer about 50 ml. of the sifted material into a 100-ml. graduated cylinder, which has been weighed to the nearest 0.1 gram, by gently sliding (not pouring) the material from the paper into the cylinder.

"Drop the cylinder 3 times (without jarring when lifting) through a distance of 1 inch at 2 second intervals. The dropping action should be regular and timed with a stop watch and the cylinder should be dropped on a hard wood surface, such as an oak desk top. Allow the contents of the cylinder to settle for ½ minute and note the volume of the sample.

"Weigh the cylinder and sample and subtract the weight of the cylinder alone to determine the sample weight.

"Calculation of Results:

$$\frac{\text{Ml. of sample in cylinder} \times 28.3}{\text{Grams of sample taken}} = \text{bulk in ml./oz.}$$

or

$$\frac{\text{Ml. of sample in cylinder}}{\text{Grams of sample taken}} = \text{bulk in ml./gm.}"$$

Since this is the method suppliers will use as well as users of the powder chemicals, it should find uniform adoption. Longer usage will overcome variables which might be discovered after more people have tried it. Average deviation from the method recommended is betwen 3 and 4 percent, which must be admitted as being nominal.

Infrared

At the meeting of the T. G. A. Scientific Section and the Society of Cosmetic Chemists last December, several papers on infrared spectrophotometry were given. One should not get the wrong idea from this new laboratory tool. It can do many things but not everything. Since water heavily absorbs infrared, ordinary water containing ingredients present problems for analysis by this technique.

Where many materials are

A NEW PERFUME OIL CONCENTRATE . . .

Cyprene

Embodying all the warmth and sweetness of the popular Chypre fragrance

Here is a perfume oil concentrate that has the happy facility of combining true fragrance reproduction with amazingly low price. Thus, you can give the wonderful Chypre fragrance to your perfume, cologne, talc, sachet and bath oil and still keep them extremely competitive in price. Convince yourself! Why not write us for samples of CYPRENE for your own tests . . . no obligation, of course.

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bought to a specification—this refers to cosmetic materials as well as perfume ingredients—it is possible by means of infrared to determine in minutes whether the test substance matches with the specifications of acceptable materials. The infrared spectrophotometer can detect incomplete esterification, adulteration, contamination and any other substance which is not supposed to be present in the product under test.

Most of the references at the meetings mentioned above dealt with perfumes and essential oils. While it is true that we are buying oils and aromatic chemicals of predetermined purity I wonder if perhaps we are not overlooking the fact that in perfume the only thing that counts is the *odor*. For, as we know, many perfume materials can meet specifications (up to now these did not include infrared criteria) and yet not meet with smell acceptance. In fact, in factories producing aromatic substance the perfumer's task is to determine the quality of each fragrance of distillate for we know it takes only traces of strange substance to downgrade a perfumer's material by one or more grades.

This does not imply that infrared spectroscopy has not proved itself or that it doesn't have a place in cosmetic analysis; quite the reverse. This is simply a note of caution. Let's take in stride the help this instrument can give us, but let us not be blind to its practical limitations.

Questions and Answers

992: Synthetic Detergent Odor

Q. Please recommend sources of odor which, when mixed with dry synthetic detergent for bubble bath, will not seep through small paper envelope package while on counter display or in storage.

A. We don't see how the odor can seep through. The powder bubble bath might seep through and if it is perfumed it will take the odor along with it. On the other hand, the perfume may be lost on storage but that is a different problem. If you are using a Nocconol then this will tend to deodorize the fragrance. Perfumes for synthetic detergents must be compounded especially for that use. Recent tests made showed that out of fifty fragrances only two stood up over a period of time in a synthetic detergent even though all the fragrances were compounded for this purpose. We suggest you take up the problem with your perfume compound supplier.

993: Removing Nail Polish

Q. We address an inquiry to you regarding the structure of the various over-coatings and under-coatings now being put out by several nail polish manufacturers. We find that these new coatings resist our solvents appreciably. We are anxious to keep up the reputation of our polish remover for fast removal of polish. We have our own highly developed combination of solvents, but either we will have to use a higher percentage of these solvents or find an additional solvent to meet this new situation. If we can find out what the principal ingredient is which makes these coatings so hard to remove, it would be most helpful. *V.O.M., New Jersey*

A. The composition of the coating of the nail base or overcoats is unknown to us. All we can suggest to you is to continue experimenting with various solvents until you find one that does the job.

994: "Skin Strap" Formulation

Q. Where can we obtain information as to the formula of the new "skin straps" which are being so heavily advertised for firming and tightening the skin? It sounds rather fantastic but articles and references seem to indicate that the lotion consists of a film which gradually dries and creates a tightening effect. *J. L., New York*

A. The analyses of the three leading ones show they are entirely different from each other. One contains an astringent salt in addition to film forming compositions. If your emulsion is to contain an astringent it must obviously be made from emulsifiers other than those containing soap or the emulsion will split. There is a supplier who makes a series of such emulsifiers for such purposes and we suggest that you contact them for this information. The name is sent under separate cover. We believe that best results could be obtained from an emulsifier containing a gum plus an astringent salt. As mentioned above, the emulsion must be compatible with the astringent and the same applies to the gum.

995: Stable Liquid Lanolin

Q. We are unable to secure proprietary American products for producing stable lanolin emulsions in our cold wave solutions. We have not been able to produce stable emulsions with glycerylmonostearate, sulfated fatty alcohols, or other emulsifiers, and are wondering if you can put us on the right track to enable us to produce a stable liquid lanolin emulsion for use in our cold wave solution.
A. G., France

A. Try a mixture of equal parts of sulfonated castor oil (iron free) and lanolin and use this mixture in your waving solution. You may want to vary the proportion of the two ingredients. We are also sending you the name of a supplier of a well accepted cold wave opacifier.

996: Cold Wave Neutralizer

Q. We have noticed a few comments on a self-neutralizing cold wave, using manganese salts as a catalyst. Would you be kind enough to inform us of the patent no.? The invention does not seem to be covered here by any patents.
Y.F., Denmark

A. The patent number for the self neutralizing cold wave using manganese chloride or cobaltous chloride is U. S. Patent No. 2,540,980. It may be that the patent was not issued in Denmark. The experience with such solutions is that when no neutralizer is used, it takes a bit longer to produce the wave. It will take more reducing agent as well, because obviously the material is being oxidized from the moment it is exposed to air.

997: Sun Tan Product Formula

Q. We are interested in formulating a sun tan lotion and would appreciate your suggesting several formulations of a cream type lotion.
L.A.P., Florida

A. We are enclosing a reprint of an article which appeared in THE AMERICAN PERFUMER *which covers the whole subject of sunburn preparations and includes formulas.*

Progress in Perfumery Materials

Developments in 1952 . . . Theory of odors and perfumes . . . Perfumery isolates . . . Analytical methods . . . Part I

PAUL Z. BEDOUKIAN, Ph.D.*
Author of Perfumery Synthetics and Isolates

AMONG the many rewards of scientific research in our industry is the ever increasing number of hitherto expensive perfumery materials now available in a lower price range. Even more important to the perfumer is the discovery of certain new synthetics which have made possible the creation of attractive fragrances for a wider range of products and uses.

Theory of Odors and Perfumes

The exact nature of odor and its perception remains unknown and it is therefore not surprising to find every year new publications which endeavor to throw some light on this challenging subject. A very interesting and lengthy review appeared in a German chemical journal (1). Another article points out the sensitivity of the human olfactory organs to stereoisomers of the same compound (2). A new osmometer has been constructed which is claimed to have definite advantages over older types (2a). Those who work with odorous materials are well aware of the phenomenon of fatigue, whereby one becomes insensitive to certain odorous materials on prolonged contact with them. This aspect of the problem was also the subject of an interesting discussion (3). In view of our inability to evaluate odors and flavors with any degree of scientific exactitude, the panel method of evaluation is becoming more and more popular. A mathematical treatise on this method was published recently (4).

It had long been claimed (5) that odorous materials had the power to ionize the air or to condense water vapor. It is now established, however, that odorous materials do not in any way affect the electrical behavior of vapors or air, and that the earlier theory was the result of errors in experimental conditions. (6).

In the realm of perfume compounding, Morel continues his interesting series of discussions on the use of various classes of aromatics in perfumery (7–14). These articles contain a wealth of information on a very large number of materials and it is hoped that before long they will appear in book form.

The use of certain synthetic aromatics in compounding French luxury perfumes was discussed in a recent report (14a). Various chemical reactions taking place during the process of aging of perfumes were enumerated in some detail in another article (14b).

There is an interesting review on old-fashioned perfumes which were popular not very long ago, such as

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Jockey Club, Mousseline, Peau d'Espagne, and various floral perfumes (15). The development of eau-de-colognes has also been traced (15a). Other informative articles dealing with the duplication of rose perfumes (16), problems in soap perfumery (17), and the recently developed field of perfumes suitable for aerosols (18).

Flower Oils

A study has been made of an absolute obtained from coffee tree flowers (19). In view of the importance of jasmin and rose oils, articles on these are of much interest to the reader. Various jasmin oils, the French and Italian in particular, were discussed in some detail in a recent article (20). The same author discusses the factors which may account for the difference in the odor quality of Bulgarian, Turkish and Moroccan rose oils (21). The oil obtained from Moroccan roses was subjected to a detailed study (22).

The production of orris oil in Italy was described, as well as the factors influencing its quality (23). Another publication deals with the production of various flower oils in southern France; e.g., rose and orange flower (24). A comparison was made of absolute orange flower oil and oil of neroli from orange flower water (25). The author also offers valuable suggestions for the formulations of synthetic neroli oils (26). In their study of the absolute obtained from the butterfly lily (Hedychium flav. Roxb.), the investigators noted the occurrence of eugenol, linalol, benzyl benzoate, and of aldehydic and ketonic constituents (27).

Commercial methods of extracting natural perfumes from flowers by means of volatile solvents have been described by a well-known author (28). A Japanese patent states that a mixture of oxides of magnesium and silicon can be used for the absorption of flower perfume vapors with a view to preparing absolutes (29).

An interesting article discusses the British perfume industry and the history of leading essential oil houses, with special emphasis on the growth of the industry during the past century (30).

Analytical Methods

In his discussion of methods applicable to the analysis of the constituents of essential oils, one author stresses the importance of little used procedures such as counter-current extraction and chromatography. The proper use of an efficient column in evaluating the relative purity of the fractions is also given (31). Other authors review at some length the various standard methods used in the analysis of essential oils (32) (33). In view of the difficulty of determining the end point in titrations with bromophenol blue indicator, a potentiometric titration is suggested for the determination of aldehydes in essential oils (34) (35).

Salicylaldehyde gives a color reaction with essential oils in an alkali alcoholic solution. The intensity of color given by numerous essential oils was reported by a worker (36). The viscosities and parachors of a number of perfumery aldehydes and ketones were reported by another worker (37). A method is described for the determination of the oil content of a perfume or cologne (38).

Examination of Raman and infrared spectra of a large number of acyclic terpenes and sesquiterpenes indicated that with rare exceptions they all have the isopropylidenic end grouping (39). The author also studied the ultra violet absorption of vetivones and their derivatives (40), and of piperitone (41).

Two new quantitative methods of determination of ascaridol in oil of Chenopodium have been reported (42). Methods for the rapid determination of carvone in oil of spearment have been proposed (43).

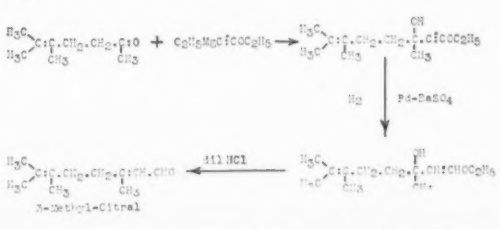
Ionone-Irone

The separation of alpha and beta ionone has always been a difficult industrial problem. It has been found possible to separate the two isomers by fractional distillation, using an 80 plate Podbielniak Hyper-Cal column with a reflux ratio of 35:1 at 0.1 mm. pressure (44).

A synthesis is reported of the lower homolog of citral, namely 2,5-dimethyl-1,5-heptadien-7-al, and its condensation product, with acetone (45). Both cis and trans dihydrocyclogeraniol have been prepared by the reduction of the corresponding acid chlorides with lithium aluminum hydride (46). Rosenmund reduction of the acid chlorides gave the corresponding dihydrocitrals which on reacting with acetone gave dihydroionones of known configuration. The ketals of both alpha and beta ionone were formed by reacting it with propylene glycol in the presence of toluene sulfonic acid. Another investigator prepared the propylene ketals of several ionones, methyl ionones and irone, and reported studies on their physical properties (47).

Syntheses of various derivatives of ionone have been reported. These include the preparation of 4-hydroxy-beta-ionone, dehydro-beta-ionone, 4-keto-beta-ionone and various hydrogenation products (48). Under proper experimental conditions, dehydro-beta-ionone was shown to undergo Darzens glycidic ester condensation with ethyl chloroacetate (49). The physical characteristics of derivatives of pseudo-isomethyl ionone and isomethyl ionone have been investigated (50).

Synthetic irone is now being produced commercially. Newer methods of its preparation are constantly being investigated in order to discover cheaper processes of manufacture. In this connection, it is interesting to note a new method for preparing 6-methyl citral which is an indispensable intermediate in making synthetic irone (51). The process involves the Van Dorp and Arens synthesis of alpha beta unsaturated aldehydes. The same method has been used by two other groups of investigators in the synthesis of 3-methyl citral stereoisomers (52) (53). The reaction is of general interest and is illustrated below:



Two stereoisomers, namely, cis-(2,3)-dihydroirone and cis-(2,6)-tetrahydroirone, have been prepared starting from 6-methyl citral (54). Ozonization of alpha and beta irones gave the corresponding methyl isogeronic acids (55). The derivatives of beta irone show characteristics very similar to that of beta ionone (56). The infrared

PAUL Z. BEDOUKIAN, Ph.D., chief chemist for Faberge, Inc., and author of Perfumery Synthetics and Isolates, has hereby written another of his annual reviews of progress in perfumery materials for The American Perfumer.

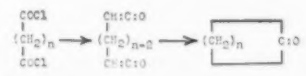
absorption of several derivatives of ionones and irones has been reported (57).

Macrocyclic Musks

With the increasing difficulty of obtaining natural musk pods at reasonable prices, it is encouraging to note the appearance of lower priced macrocyclic ketones and lactones which possess the desired true musk odor at even very low concentrations.

Interest in these products is evidenced by a number of informative reviews on the subject. An excellent article (58) describes the properties and uses of the well-known lactone pentadecanolide, sold under several trade names such as exaltolide, thibetolide, muscolactone, muskolid, etc. Other interesting papers cover the recent advances in the synthesis of large-ring compounds (59), the synthesis of civetone and muscone (60), and a general treatise on macrocyclic compounds (61).

One is also impressed by the number of recent patents dealing with the manufacture of this class of compounds. One patent describes the preparation of cyclopentadecanone from the acyloin by means of reduction with acidic zinc (62). Another patent describes the conversion of acid chlorides of omega dicarboxylic acids to large ring ketones (63). The reaction shown below is



reported to give 22 per cent dl-muscone and 33 per cent civetone. On treating the esters of omega dicarboxylic acids with sodium methylate under proper conditions, it is possible to obtain the corresponding cyclic ketone in good yields. This procedure is likewise applicable to the synthesis of large ring ketone having an oxygen in the ring. An improved synthesis of tetradecencarboxylic acids, an intermediate in the preparation of large ring lactones, is given in another patent (65).

The synthesis of d-muscone, l-muscone and dl-muscone has been reported (66).

Azulenes

The azulenes constitute an unusual type of highly colored compound having adjacent five and seven ring structures with continuous conjugation. A large number of compounds having azulenic structure have been prepared and studied in the past. The synthesis of polycyclic azulenes and of compounds possessing a nitrogen in the seven membered ring has been reported recently (67). The formation of azulene in the plant (68) and commercial methods of its extraction (69) were discussed in two publications. It was shown that the azulene content of the camomile flower was at its maximum during the noon and midnight hours, and lowest in the late afternoon (70).

A comprehensive article on the azulenes appeared in the Chemical Reviews (71). Several other reviews have appeared which deal with the use of azulenes in pharmaceuticals and cosmetics (72), the formation of azulenes in plants (73), the relationship of bicyclic sesquiterpenes to azulenes (74), and there is a theoretical discussion on the basic properties of azulenes (75).

Sesquiterpenes

In the realm of sesquiterpenes, considerable work is being done towards the final elucidation of the structure of caryophyllenes. It has now been established that caryophyllene consists of a nine membered ring with an adjacent cyclobutane ring. The position of the double bonds is being ascertained by means of oxidative degradation reactions. Such reactions have been carried out on beta (76) and gamma (77) caryophyllene. Oxidation reactions of caryophyllene oxide have thrown further light on the structure of caryophyllenes (78) (79). Cyclization of beta caryophyllene yielded 60 per cent clovene, whose properties were investigated (80).

On the basis of hydrogenation and ozonization experiments, and the study of physical properties of the reaction products, an eleven membered ring structure possessing three double bonds has been assigned to humulene (81). A new structure has been assigned to lanceol on the basis of similar studies (82). Preliminary investigations have been made on ledol, ledene and leddiene (83). A probable structure has been assigned to linderene through a study of its dehydrogenation products (84). 3-Methoxy cadalene has been prepared as an intermediate in the synthesis of cadalene (85). Intermediate compounds for the final synthesis of ambreinolide have been studied (86).

The sesquiterpene analog of lavandulol has been synthesized and its cyclization product on treatment with formic acid investigated (87).

Perfumery Isolates

There have been a number of reports on various isolates which are of interest to our industry The linalool obtained from a variety of rosewood oil was found to have an unusually high rotation of 6 to 6.5. On the other hand, the terpineol accompanying it was found to be optically inactive (88). The synthesis of an isomer of lavandulol having a meta cymene skeletal structure was reported recently (89). 3-Methylene-4-(hydroxymethyl)-cyclohexane has been synthesized and shown to be identical with cyclolavandulol (90). Geraniol has been obtained by rearrangement of 3,3,5-trimethyl-1-1, 5-hexadiene (91). Citronellic acid would not undergo cyclization under ordinary conditions but the amide of the acid chloride underwent cyclization to give a product which appeared to be pulegone (92). A review article discusses recent developments concerning the structure of various acyclic terpenes and sesquiterpenes (93).

The occurrence of isopulegone in Timija mint oil (Mentho rotundifolia) and pennyroyal (Mentha pulegium) has been confirmed (94). The pure semicarba-

zone of l-carvomenthone was found to exhibit mutarotation in acetic acid solutions (95). Oxidation of cineole with hydrogen peroxide yielded terpin hydrate and alpha terpineol (96). A Japanese patent describes the separation of cineole from camphor oil by reacting it with 2-naphthol under suitable conditions (97).

Perfumery Synthetics

A number of dialkyl acetaldehydes, including dibutyl acetaldehyde, ethyl amyl acetaldehyde, and propylbutyl acetaldehyde were prepared and their odors compared (98). On condensing benzaldehyde with methyl ethyl ketone, it was found that under acidic conditions, it is the methylene group which reacts, whereas under the influence of alkali, the condensation takes place through the methyl group (99). In the Ponndorf-Meerwein-Verley reaction, much better yields are claimed by adding a little Raney nickel to the reaction mixture (100).

The Oxo synthesis has not been much used in our industry although it is finding increasing usage in the manufacture of aldehydes. It offers tremendous advantages over the older classic methods and may prove to be of great value in the preparation of well-known and the newer aldehydes. Some of the possible syntheses have been shown in a series of laboratory scale experiments (101).

A number of substituted hydratropic aldehydes have been prepared and their odors noted. For example, meta-methoxy hydratropic aldehyde is listed as having an odor of lilac and lily-of-the-valley. The intermediate glycidic ester was found to be almost odorless (102).

One of the newer synthetics being used in perfumery is nopol and its esters. Its preparation was reported in a recent publication (103).

Citronellic acid, on treatment with 85 per cent sulfuric acid, yielded the gamma lactone possessing a weak aromatic odor. Treatment with 98 per cent phosphoric acid under reduced pressure gave small yields of 2-isobutyl-4-methyl-2-cyclopenten-1-one (104). Both cis and trans jasmone have been synthesized. The natural jasmone from Jasminum grandiflorum is indicated to be the cis isomer (105). Prolonged refluxing of eugenol with Raney nickel catalyst isomerizes it to iso-eugenol, as reported in a recent publication (106).

Several very interesting and informative reviews during the past year dealt with synthetic aromatics. Among these were extensive reviews on the manufacture, properties and uses of anethole (107) and terpineol (108); the preparation of a number of quinoline derivatives, their physical properties and use in perfumery (109); the scope and mechanism of the Doebner-Miller synthesis of substituted quinolines (110).

(This review will be concluded in the succeeding issue of The American Perfumer.)

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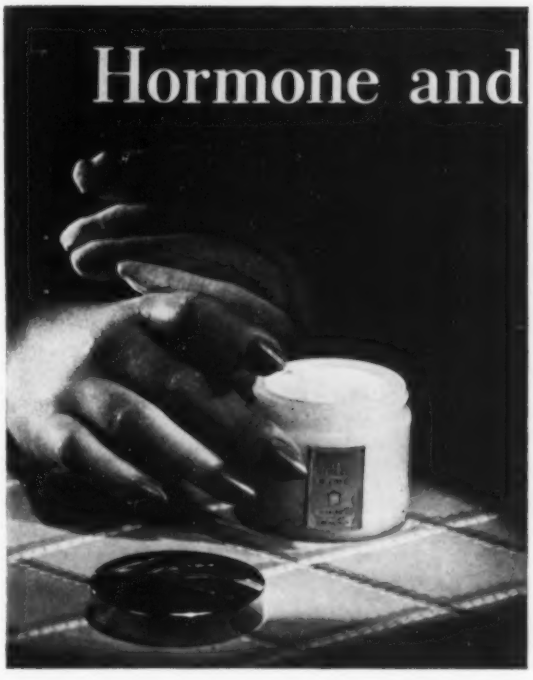
Forget the business outlook . . . be on the lookout for business.—*Phoenix Flame*

Committee: A group of the unfit, appointed by the unwilling, to undertake the unnecessary.—*Phoenix Flame*

Hormone and Vitamin Creams



Part II. Review of the characteristics and functions of vitamins in creams

F. V. WELLS, F. C. S.*

THE application of vitamins to the skin has been investigated fairly widely during the past two or three decades. The results so far obtained are inconclusive, especially if one rules out of consideration the essential fatty unsaturates, whose designation of "vitamin F" has been warmly disputed. There is, nevertheless, a wealth of medical evidence available concerning numerous skin conditions that appear to have been improved by the topical application of vitamins. While it is true that much of this evidence is of a confusing, and at times contradictory, character, there is no doubt that the application to the skin of vitamins cannot simply be written off as useless.

In any cosmetic commentary of this kind it is worth while emphasising the chemical and functional interrelationships existing between such normal constituents of the skin as cholesterol and the steroid hormones and vitamins. Cholesterol is one of a number of closely related substances, all possessing the characteristic sterol structure. Other members of the group include ergosterol (a near relative of Vitamin D) and the sex hormones, estrone and androsterone. The stimulatory or restraining action of certain of the vitamins, such as D and E, on the endocrine glands, would appear to emphasise that a close physiological relationship also exists between at least some of the vitamins and some of the hormones.

Traces of vitamins are normally found in the skin and its secretions, several members of the B complex being known to be excreted in the sweat. Vitamins, in general, are readily absorbed by the skin. Probably the most widely used vitamins in cosmetics are A, D, E, together with C (as lemon juice) and B (as yeast). Judging by those so far examined, they are for the most part ineffective, but that is not to say that a properly selected vitamin, in the right type of vehicle, may not—on some future occasion—give rise to more spectacular results. The following vitamins may be considered in abbreviated detail.

Vitamin A

Anti-infective, anti-xerophthalmic. Extracted from fish liver oils, where it occurs mostly in esterified form. The B.P. Concentrated Solution of Vitamin A is a yellow, oily liquid of faint odour. Soluble in fats, oils and organic solvents insoluble in water, slightly soluble in 95 per cent alcohol. Stable in alkaline media, especially as esters. Has been used for the treatment of acne, burns, wounds, skin ulcers, phrynoderma, keratosis follicularis, etc. It has been suggested that Vitamin A creams should contain not less than 50 to 100 International Units of the vitamin per gram of finished cream (K. Rothemann.)

Carotene, precursor of Vitamin A, is sometimes recommended as a cosmetic substitute. It appears to possess an astringent action, but discolours too pronouncedly for normal cosmetic use. Moreover, its value as a cosmetic substitute for the vitamin seems highly debatable. Scission of the molecule, to give the vitamin, takes place in the intestines and there is no direct evidence to suggest that it also takes place in the skin, although it may possibly do so by means of an oxidation-reduction mechanism similar to the chemical conversion accomplished by Hunter and Williams[8] in 1945. Another disadvantaege of carotene is that it is not quantitatively equivalent to Vitamin A, about two or three times the amount being required to obtain the corresponding biological activity.

One of the six indications of early Vitamin A defi-

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ciency quoted by Harris[9] is the occurrence of xerosis (abnormal dryness) and follicular eruptions in the skin, the latter being dry and thickened. While this might seem to favour its topical application to abnormally dry skins, the fact remains that little of the vitamin is lost in cooking and relatively large, readily available reserves are stored in the liver. The most satisfactory means of raising the general levelof this vitamin would appear to be by increasing the oral intake by way of the diet. Even so, the recent studies made by Sabella of the effect of locally applied Vitamin A seems to have proven, by means of histological sections, that when Vitamin A was administered topically to the skin for ten days, there was an average increase of epidermal thickness to twice the normal size. There was also a notable increase in the extent of the stratum granulosum and decreased rate of keratin formation. No evidence of any untoward or toxic reactions was noted. (According to Flesch, Vitamin A can cause temporary loss of hair in animals when given internally or externally—Ed.)

A point of some interest to perfumers is that Vitamin A, (axerophthol) consists of the B (beta) ionone ring structure plus an isoprenic side chain. The visual purple and yellow in the retina of the eye are both derivatives of Vitamin A, the visual yellow (retinene) being the aldehyde.

In the normal metabolism of the epidermis, it is considered that Vitamin A is required to prevent metaplasia (abnormal tissue development) and hyperkeratosis (excessive development of the horny layer.)

Vitamin B

The Vitamin B complex may be conveniently divided into its two main components, thiamine and nicotinamide, and the following additional factors: riboflavin, pyridoxine, pantothenic acid, folic acid, p.-aminobenzoic acid, inositol, choline, biotin and Vitamin B_{12} (the anti-anaemia factor).

Vitamin B_1, the anti-beri-beri factor, is now widely known as thiamine and also as aneurin. As a component of the co-carboxylase system, thiamine plays an important part in the pyruvate metabolism of the living cells, including the cells of the skin. It appears to control, directly or indirectly, many chemical changes, including decarboxylation, anaerobic dismutation, certain types of oxidation and various synthetic transformations[9]. The biochemical role of thiamine, which is distinguished by the presence of sulphur in its molecule, is so vital and complex that the vitamin cannot be ruled out of consideration from the cosmetic point of view, despite the fact that deficiency of it does not appear to give rise to significant skin lesions. Lubowe considers that thiamine is required to maintain the normal elasticity, rigidity and colour of the skin[10].

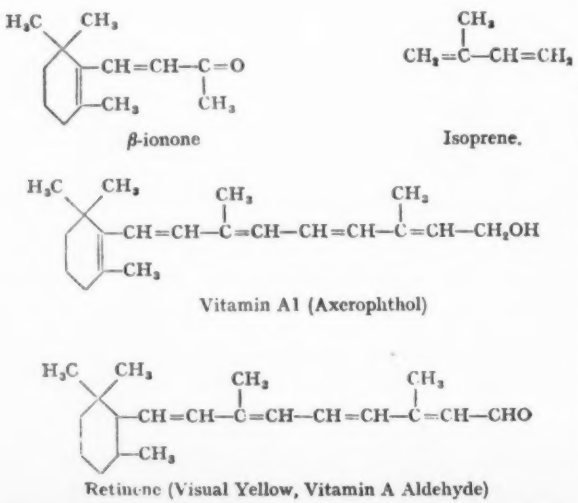

Fig. 2. Structural resemblances of β-ionone, vitamin A and retinene.

Synthetically prepared thiamine hydrochloride is readily soluble in water (1 g. in about 1 ml.) It is also soluble in glycerol (1 in 18) and alcohol (1 in 100 of 95 per cent), but is practically insoluble in fat solvents. It is stable in the dry form and can be sterilised at 110° C in aqueous solution, but if the pH of the solution is above 5.5 it is rapidly destroyed. The vitamin is fairly readily destroyed by heat and much more speedily in the presence of alkalis. It is unstable to oxidising and reducing agents and is precipitated by tanning.

In current cosmetic practice, the chief source of thiamine is the yeast content of dry yeast packs, to which water is added before application. The true value of such packs is not known, although some beauty salons strongly favour their use.

Vitamin B_2 was originally considered to be a single substance, the deficiency of which gave rise to pellagra. Nowadays, the true P.-P. factor is identified as nicotinic acid or nicotinamide (niacin, niacin amide). One of the most typical symptoms of pellagra is the development of skin lesions, which at first resemble sun-provoked erythema and then become more deep-seated, being followed by extensive cracking, thickening and pigmentation. Nicotinic acid and its amide seem to play a part in the maintenance of the collagenous fibrils and the normal water balance of the skin, but at present no special case can be made out for the use of these particular components of the B_2 complex in locally applied cosmetic preparations. Nicotinic acid, in fact, can give rise to undesirable flushing and irritation of the skin when given in large doses orally, though the amide is free from this defect. 1 gram of nicotinamide dissolves in about 1 ml. water, 1.5 alcohol, 10 ml. glycerol.

Nicotinamide, as a component of the two essential "pyridine co-enzymes," is concerned with hydrogen transfer in the living cell. Riboflavin, still erroneously termed Vitamin B_2 in the current (and valuable) Merck Index, has likewise a co-enzyme function and assists in a number of oxidative enzyme reactions. Deficiency of riboflavin is known to be associated with simple cheilosis and angular stomatis (cracking and scaling of the lips and corners of the mouth), but the overall picture is still somewhat obscure. Riboflavin has a very poor range of solubilities: 1 in $\pm$ 5000 ml. of water, slightly more soluble in NaCl solutions, less soluble in alcohol, very slightly soluble in cycloheranol and amyl acetate, insoluble in ether, chloroform, acetone, benzene. Dissolves with decomposition in dilute alkalies. The sodium and monodiethanolamine salts of the equally active riboflavin 5-'phosphate are claimed to be 100 and 200 times as soluble in water, respectively, as riboflavin itself.

Results of vitamin application to the skin are inconclusive.

Deficiency of Vitamin B_6 (pyridoxine, adermine) gives rise, in rats, to a florid symmetrical dermatitis. Harris[9] holds that "man appears to need pyridoxine, and its deficiency is perhaps associated with a cheilosis similar to that seen with a deficiency of riboflavin." Vitamin B_6 hydrochloride has also received attention in the treatment of seborrheic dermatitis. According to R. W. Vilter, M.D., of Cincinnati University, patients treated with desoxy-pyridoxine, a pyridoxine antagonist, developed a dermatitis clinically and histologically indistinguishable from seborrheic dermatitis. From this he argued that seborrheic lesions, which respond to pyridoxine treatment, are a sign of human pyridoxine deficiency. He claims to have had marked success with pyridoxine hydrochloride topically applied (10 mg. per g. of cream or ointment, the vehicle being a "vanibase".) As Vilter claims successes in the treatment of spontaneous seborrhea with his locally applied Vitamin B_6 preparation, it is thought possible that this member of the B complex may prove useful in the treatment of seborrhea, dandruff, acne, eczema and other skin disorders. See also the paper by Samitz and Brown[11]. One gram of B_6 hydrochloride dissolves in 5 ml. water and 90 ml. alcohol. Acidic aqueous solutions (10 per cent w/v= pH 3.2) are stable.

Of possible significance in the cosmetic industry is the part played by pyridoxine and its derivatives, e.g. the co-enzyme pyridoxal and the amine, pyridoxamine, in such important aspects of protein metabolism as the decarboxylation of amino acids and transaminations.

Pantothenic and *p.*-aminobenzoic acids have been claimed to cure the greying and loss of hair that occur in rats artificially deprived of these materials. There is little, if any, reliable evidence to show that such findings are applicable to human beings. The patent literature issued during the past few years refers to both members of the B complex: the scientific literature relating to pantothenic acid contains interesting papers by Williams and Major [12,13], and that on PABA a notable contribution by Ansbacher[14]. Pantothenic acid is a viscous, oily liquid, extremely hygroscopic and freely soluble in water; easily destroyed by acids, bases, heat. Para-aminobenzoic acid (PABA) is a stable, crystalline substance, soluble in water (1 in 200), alcohol, ether, ethyl acetate; incompatible with oxidising agents, ferric salts.

Folic acid and its antagonists are of considerable biochemical importance but do not seem to offer any interesting possibilities to the cosmetic chemist or dermatologist. PABA, incidentally, is a component of the folic acid molecule.

A deficiency of inositol (formerly known as Bios I "growth factor") is said to cause baldness in mice and rats [15, 16], but this has no apparent bearing on human baldness, as deficiency of inositol in man has not been recorded. The close structural relative of inositol, benzene hexachloride, is probably an antagonist or anti-vitamin, just as its hexaphosphate derivative, phytic acid, antagonises or "blocks" the function of Vitamin D.

The dermatological potentialities of Vitamin B_{12} have not yet been fully explored. Indeed, at the time of writing, the exact chemical structure of this potent, cobalt-containing compound has not been elucidated. It has been experimentally utilised as an anti-histaminic and may therefore be of interest in the treatment of allergic dermatoses. Generally encouraging results have been claimed for it, in the treatment of shingles, infantile eczema, lupus vulgaris and seborrheic dermatitis. It is reputedly incompatible with Vitamin C.

Choline does not appear to enter into consideration, in the subject under review. Biotin, known also as Vitamin H, is however of some interest in that a deficiency of it, in rats, is characterised by seborrheic skin lesions and loss of hair.

All members of the B complex are classified with Vitamin C as water-soluble, whereas Vitamins A, D, E and K are water-insoluble.

Vitamin C

Vitamin C or l-ascorbic acid is chiefly known as the anti-scorbutic vitamin, the lack of which results in the hemorrhagic symptoms of scurvy, with its perifollicular hemorrhages, spongy gums, loose teeth etc. The biochemical action of the vitamin is, however, so important to the organism that many other therapeutic roles have been assigned to it. One noteworthy effect of a deficiency of Vitamin C is the failure of the organism to produce a sufficiency of collagen—the intercellular cementing substance. This has an obvious significance in dermatology. The vitamin, moreover, exerts a notable regulatory action on the oxidation-reduction processes of living cells and may have value, as suggested in the medical literature, in the treatment of capillary fragility, gingevitis, excessive perspiration, exfoliating dermatitis etc. Its effect on histaminic responses is also of interest. It is capable of being absorbed through the skin.

L-ascorbic acid has a tendency to oxidise on exposure to air and light. Oxidation of aqueous solutions is accelerated by alkalis, copper and iron, retarded by acids. Soluble in water (1 in 3), alcohol (1 in 50) and glycerin (1 in 100). Insolubie in organic solvents. Widely distributed in nature, good sources being citrus fruits, hip berries, black currants, fresh tea leaves, parsley. Stabilised lemon juice (as a source of l-ascorbic acid) has been

used in cosmetic creams and lotions. Recommended dietary allowance of Vitamin C per day: 75 mg. Medical dose per day: 0.5 to 1 g.

Vitamin D

Nutritional factor preventing rickets. Vitamin D or D_2 (calciferol) is prepared by U.V. treatment of ergosterol. D_3 or activated 7-dehydrocholesterol occurs in fish liver oils. Vitamin D is absorbed through the skin and has been used in cosmetic creams. It was formerly employed by dermatologists in the treatment of psoriasis and pemphigus. There appears to be no corroborative proof of Winter's statement that it "has been successfully used externally in the treatment of acne, eczema and erythematic conditions of all kinds." Is is insoluble in water, soluble in the usual organic solvents, slightly soluble in vegetable oils. De Navarre stipulates 250 International Units per oz. of cream as the *minimum* for cosmetic use. Harry refers to the use of 200 I.U. per gram of cream. The medical dose (Merck Index) is given as 200 to 60,000 I.U. per day.

A development that might well favour the inclusion of Vitamin D in creams and salves intended for skin treatment is the spectacular cure of lupus vulgaris (a hitherto intractable skin disease) achieved by massive doses of the vitamin administered orally[17]. Not less significant than the success of this treatment is its attendant danger of hypervitaminosis, leading to abnormal calcium deposits in the kidneys, aorta etc. In view of the fact that the skin will absorb the vitamin, it would seem highly desirable to try the effect on lupus vulgaris of heavily concentrated local applications. This would obviate the grave risk of hypervitaminosis and, if only partially successful, would greatly stimulate dermato-cosmetological interest in its latent possibilities.

Vitamin E

Vitamin E or d-tocopherol occurs in seed germ oils, lettuce, alfalfa etc. It is prepared commercially as wheat germ oil. Its biologic action is somewhat similar to that of the ovarian hormones, and it has been widely used medically in cases of female sterility and habitual abor-

Vitamin	Therapeutic Indications. Treatment of: *	Approx. Daily Requirement of Adult Human †	Medicinal Dosage, Daily ‡
A (axerophthol) fat-soluble	Xerosis (abnormal dryness of skin, etc.) Hyperkeratosis Ichthyosis Follicular infections Wounds, burns Skin ulcers Acne	3,000 I.U.	25,000.I.U. or more.
D (calciferol) f.-s.	Rickets Scleroderma Pemphigus Psoriasis Lupus vulgaris	Up to 400 I.U.	400 I.U. or more.
E (alpha-tocopherol) f.-s.	Sterility Fibrositis Vascular purpura	—	0·2 to 0·6 g.
K (3-phytyl menadione) f.s.	Haemorrhagic states (see text)	—	0·25 to 1 g.
B1 (thiamine) hydrochloride water-soluble	Beri-beri Neuritis	300 to 400 I.U. (1 mg.=330 I.U.)	10 to 50 mg.
Nicotinamide (PP factor) w.-s.	Pellagra	12 mg.	0·3 to 1 g.
Riboflavin w.-s.	Cheilitis Angular stomatitis Keratitis	1 to 1·8 mg.	5 to 15 mg.
B·6 (pyridoxine) hydrochloride w.-s.	Muscular dystrophies Eczema Seborrhoeic dermatitis Acne vulgaris	—	§
C (L-ascorbic acid) w.-s.	Scurvy gingevitis, pyorrhoea Dental caries Purpura Wounds Corneal ulceration, etc.	30–75 mg.	0·5 to 1 g.

* This list is necessarily abbreviated.
† Requirements according to League of Nations and U.S. National Research Council.
‡ Dosages mostly in accordance with Merck Index, 6th Edition.
§ See text for suggested topical dosage.

The vitamins: therapeutic indications and dosages

tion. Insoluble in water; soluble in oils, fats, organic solvents. Very stable to heat and alkalis. Gradually darkens on exposure to light. Oral dose: 0.2 to 0.6 g. per day. May prove of use in estrogenic type creams.

Vitamin F

Vitamin F (so-called) may also be dealt with under this heading. It has received much attention in the cosmetic literature. Early claims were too sweeping in character but many writers now appear to regard it as a cosmetic material of real, if limited, use. The term "vitamin F" may refer to linoleic and linolenic acids but has also been ascribed to particular stereoisomers and related esters. The terms "essential fatty acids" and "essential unsaturated fatty acids" have likewise been used to denote "vitamin F." Linseed oil fatty acids, arachis oil fatty acids and methyl linoleate, have all been suggested for use to remedy unsaturated fatty acid deficiencies in the hair, skin and nails. Tables of suggested dosages for different types of toilet preparation have been published by the original sponsors.

British Patent 609,811 (Society of Chemical Industry, Basle) covers the joint use of nicotinic acid amide and a vitamin F substance, specified as a polyunsaturated fatty acid or ester thereof having a minimum I.V. of 119, or a natural product of like type. Natural products mentioned in the specification include linseed, sunflower, walnut and poppy seed oils. Cosmetic emulsions cited by the patent feature triethanolamine stearate and synthetic detergents as the emulsifying agents. (Corn oil is a rich natural source of "essential unsaturates.")

Vitamin P

Vitamin P (so-called) is also the subject of dispute. A joint committee of the American Institute of Chemists and the A.S.B.C. recommended in 1950 that the term "Vitamin P" should no longer be employed, since the identity of such a substance of a vitamin character had not been established. Known also as citrin and "the permeability vitamin," it is said to occur widely in nature, often in association with the somewhat similarly acting Vitamin C. Deficiency of citrin is characterised, it is claimed, by increased capillary fragility and permeability. It has been administered orally in cases of psoriasis and purpura, and has been suggested for use in anti-haemorrhoidal suppositories.

Vitamin K

This vitamin, first described by the Danish worker, Dam, in 1935, finds clinical use in hemorrhagic conditions specifically associated with low prothrombin values.

Formulation of Vitamin Creams

This follows on what has already been written in regard to emollient creams in general and hormone creams. Most published formulae (e.g. those suggested by Winter, Rothemann and R. M. Gattefossé) are basically cold creams, containing vitamins and vitamin extracts, hormone substances, cholesterol, lecithin etc. as additional constituents. It is probable that more effective preparations could be prepared by using an emulsifying wax of the Lanette Wax SX type, or a modified triethanolamine or other suitable o/w-favouring emulsifying agent.

The dosages of vitamins may be experimentally regulated in accordance with the indications given in the foregoing notes and appended table.

Quite apart from the avoidance of simple chemical incompatibilities and the consideration of suitable emulsifying and preservative agents, optimum pH and other factors favouring effective biological action, there is one other, less usual aspect of this subject that ought to be carefully considered. I refer to the type of biological antagonism that occurs between certain metabolites (e.g. vitamins, hormones, amino acids) and what Woolley, pioneer of this branch of study, has very reasonably termed "antimetabolites"[18]. These latter are "structural analogues antagonistic to metabolites," the two antagonistic substances often being competitive (e.g. thiamine and pyrithiamine, PABA and sulfanilamide). There are also non-competitive, irreversible reactions to be considered in this category (e.g. ascorbic acid and glucoascorbic acid). Of special interest to the student of vitamins and hormones are the biological antagonisms, as distinct from chemical incompatibilities, that exist between such structurally similar substances as:

PABA and sulfonamides,
Vitamin K and dicoumarol,
Thiamine and pyrithiamine,
Ascorbic acid and glucoascorbic acid,
d-tocopherol and its quinone,
Inositol and hexachlorocyclohexane,
Pyridoxine and desoxypyridoxine
Testosterone and estrone.

Many other similar antagonisms exist between such substances of cosmetic interest as isoleucine (leucine), lysine (arginine) and methionine (ethionine, norleucine, methoxinine.) For further information reference should be made to Woolley's book[18]. While the study of antimetabolites shows the chemist what substances he should, in certain cases, avoid, it also has a more positive value in suggesting a biologically acceptable means of neutralising the undesired action of existing metabolites. This particular approach to chemotherapy is undoubtedly of major importance and from it many real advances in skin therapeutics may be expected.

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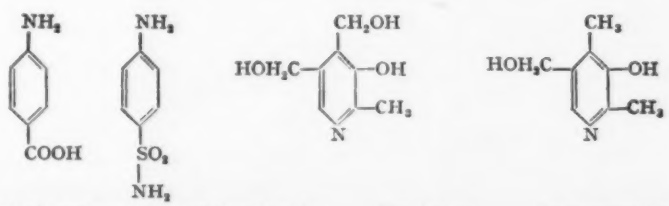


p-aminobenzoic acid Sulphanilamide Pyridoxine Desoxy-pyridoxine

Fig. 3. Some metabolites and anti-metabolites

In the tests dishwashing at home was banned; but participants got plenty of handwashing, climaxed on counting day by five controlled soapings and rinsings.

Cutaneous Antiseptic Activity of

2,2′-Thiobis

M. C. HUNTER, D. P. ROMAN

A new bacteriostatic agent shown to retain its antimicrobial activity in the presence of soap

THE first attempts to remove viable bacteria from the skin were made prior to the time that we knew that such things as bacteria existed. Holmes, in 1843 and Semmelweis in 1847, recognized that puerperal sepsis was transmitted from one obstetric case to another by the physicians handling the cases. Although Lister (1) is credited with the introduction of antiseptic surgery through the use of carbolic acid, both Holmes and Semmelweis had previously recommended thorough cleansing as a method of combating puerperal sepsis epidemics. These first attempts to combat infection by eradicating the disease-producing agent from the surface of the skin were surprisingly successful.

During the early part of the 20th century many attempts were made to incorporate compounds in soap which would decrease the number of bacteria on the skin more than could be achieved through the action of soap alone. Different mercury compounds were found to be partially effective but were also shown to be cumulative poisons and were not applicable for continuous use. Certain cresylic acids and cresols have been and still are used fairly extensively for their antibacterial action in the presence of soap. Although these cresylic compounds are relatively non-toxic in the concentrations used, they are likewise relatively ineffective as cutaneous antiseptics.

Because of its retention on the skin and in the hair follicles (dark slender pockets) the new bacteriostatic agent is stated to keep down the number of bacteria, believed to be the cause of body odor.

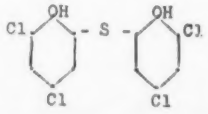
In the late 1930's a new era of effective skin antisepsis was introduced with the discovery that 2,2′-methylene bis (3,4,6-trichlorophenol) retained its antimicrobial activity in the presence of soap (2). This compound constituted a definite and significant advance in skin antisepsis.

Herein we wish to describe a unique compound which has been found to be advantageous in all practical respects as a skin antiseptic. In addition to its excellent skin degerming activity, its economic features suggest its use in standard grade soaps and cosmetics.

The most important features of any product to be used repeatedly on the skin through such media as soaps and cosmetics are: acceptable esthetic characteristics, low toxicity, maximum effectiveness, and low cost. The compound to be described has been shown to possess each of these desirable characteristics and constitutes another advance in skin antisepsis.

Physical and Chemical Properties

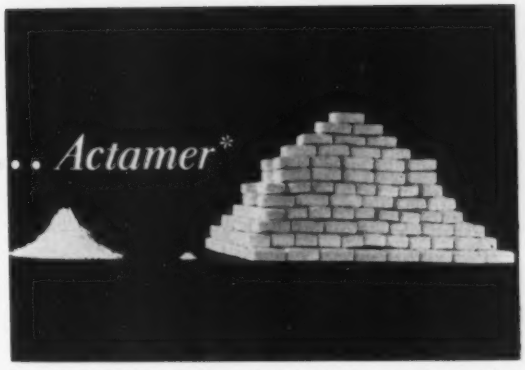
The synthesis of the compound, 2,2′-thiobis (4,6-dichlorophenol), was first described (3) in 1933. It is a colorless, tasteless and essentially odorless crystalline powder which melts at 188°C. As can be seen from the following structural formula, this compound consists of two dichlorinated phenol rings bridged by a sulfur atom.



One percent and two percent concentrations were dissolved in selected ketones, glycols, alcohols, oils and soaps and after storage for one year at 50°C. no significant changes in color, odor, consistency or antimicrobial activity were apparent. All of the stability determinations thus far carried out indicate that 2,2′-thiobis(4,6-dichlorophenol) may be slightly light sensitive but that time and temperature have little effect upon the quality of formulations or the product *per se*.

(4,6-dichlorophenol)... *Actamer**

and R. S. SHUMARD**



One pound of the powdery material at left—enough to put into more than 200 average bars of soap (right) at 2% concentration. Tiny pile in middle is requirement for one average bar.

The solubility of 2,2′-thiobis (4,6-dichlorophenol) in water is quite low, being in the order of 0.0004% at 25°C. The solubility is increased by increasing the pH to form the sodium or potassium salts. Certain of the common organic solvents are capable of solubilizing the compound quite readily as is apparent in Table I.

The high order of solubility of this compound in many solvents indicates that a minimum of difficulty will be encountered in formulating it in cosmetics. In addition, commercial use of 2,2′-thiobis (4,6-dichlorophenol) in soaps has failed to uncover any serious formulation difficulties.

Table I

Solubility of Actamer in Organic Solvents at 25°C.

Solvent	Solubility (gms/100 cc except where indicated)
Dimethyl acetamide	72.5
Polyoxyethylene sorbitan monooleate	19.0
Polyoxyethylene sorbitan monolaurate	19.0
Polyethylene glycol 200	16.0
Acetone	15.0
Amyl acetate	7.0
Lanolin	5.0 *(42°C)
Stearyl alcohol	5.0 *(59°C)
Pine Oil	4.5
Castor oil	4.0
Cetyl alcohol	3.0 *(50°C)
Octyl alcohol	2.5
95% Ethyl alcohol	2.3
99% Isopropanol	2.0
Stearic acid	1.5 *(70°C)
Coconut oil	1.0
Corn oil	1.0
Dioctyl phthalate	1.0
Cottonseed oil	0.5
Olive oil	0.5
Propylene glycol	0.5
Turkey red oil	0.5
Glycerine	< 0.2

* Solubilities determined at listed temperature (slightly above melting point of solvent).

Pharmacology

The acute oral toxicity of 2,2′-thiobis (4,6-dichlorophenol), designated as Actamer, has been determined in rats and rabbits. The results of these investigations showed Actamer to have had an LD_{50} for rats of 6.627 gms/kg. and a lethal dose for rabbits of approximately 7gms/kg. The cumulative oral toxicity, as previously reported by Shumard, Hunter and Beaver (4) was similarly low and further exemplifies the non-toxic character of Actamer when administered by the oral route.

Irritation and sensitization studies were carried out on 200 subjects by patch tests according to the technique recommended by Schwartz and Peck (5). In one series of patches 2% Actamer was applied in a carbowax ointment base and in another series of patches 0.04% Actamer was applied in a 1% solution of a bland soap in tap water. The patches were removed after either 24 (181 subjects) or 48 (20 subjects) hours and observed for possible reactions at that time and again after 24, 48 and 72 hours. Approximately 10 days after the patches were removed, identical patches were reapplied to the same areas in the same manner. These second patches remained on the skin for either 24 or 48 hours and then the areas were again examined for irritation or sensitization reactions. No reactions were detected other than an occasional mild irritation attributable to the soap.

Results of these pharmacologic investigations and others which will be reported in a later communication indicate that Actamer can be applied safely to the skin in the recommended concentrations and that little hazard would be encountered by personnel handling the concentrated material.

Cutaneous Antisepsis

The cutaneous antiseptic activity of any compound which is to be used repeatedly on the skin in such products as soaps and cosmetics is measured in terms of the degree of bacterial reduction on the skin. This

The bacteria count in the test washing samples from the fifth pan on the first day to the fifth pan on the twelfth day showed a reduction of 97.4% after continued use of soap with the new agent.

* Trademark of Monsanto Chemical Co., St. Louis

** From Organic Chemicals Division, Monsanto Chemical Co. Paper presented at December, 1952 meeting of the Scientific Section, Toilet Goods Assn.

degree of bacterial reduction is in turn dependent upon a combination of two factors—the antimicrobial activity of the compound *per se* and the substantivity of the compound to the skin.

The *in vitro* activity of Actamer against five of the most prevalent types of microorganisms commonly found on the skin is recorded in Table II. These results show that all five of the microorganisms commonly found on the skin were inhibited at a concentration of 10 ppm of Actamer and that the most prevalent species of this group, the micrococci, were inhibited at a concentration of 1.0 ppm or less. It is to be noted that the corynebacteria which are frequently incriminated as an etiologic agent of acneform conditions (6) were inhibited at a concentration of 1.0 ppm.

Table II

Activity of Actamer Against Five Common Types of Skin Bacteria

	Dilutions of Actamer in PPM			
Test Organism	*10.0*	*1.0*	*0.1*	*Control*
Micrococcus sp.	—	—	+	+
Corynebacterium sp.	—	—	+	+
Bacillus sp.	—	—	+	+
Streptococcus sp.	—	+	+	+
Mycrobacterium sp.	—	+	+	+

+ = Growth, – = Complete inhibition of growth.

The effects of Actamer on other organisms representing types occasionally found on the skin are recorded in Table III. These results show that Actamer inhibited the gram positive bacteria at very low concentrations. The efficacy of Actamer against the gram negative bacteria, however, was somewhat more erratic. Two of the types of gram negative bacteria commonly found in the intestine—the escherichia and pseudomonas groups—were uninhibited by concentrations as high as 1000 ppm whereas certain other gram negative bacteria such as the brucella and the aerobacter were inhibited at relatively low concentrations. The minimum inhibitory concentration of Actamer effective against the yeast saccharomyces was 100 ppm, whereas the pathogenic fungi trichophyton and epidermophyton were inhibited at a concentration of 10 ppm.

By additional *in vitro* tests it was shown that Actamer was essentially unaffected by the presence of soap. Actamer was shown, however, to be irreversibly inhibited in regard to its antimicrobial activity by the presence of body fluids. The serum inactivation of Actamer, however, was not an unexpected finding since similar

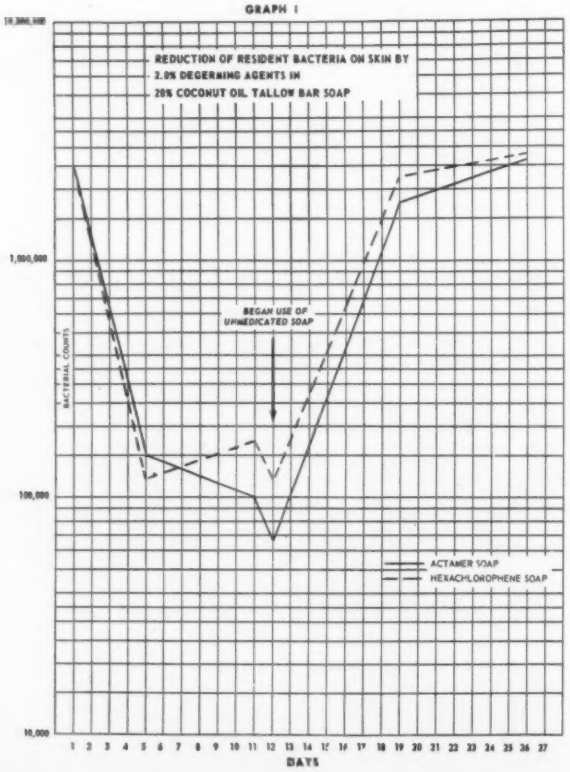
Table III

Activity of Actamer on Representatives of Occasional Skin Contaminants

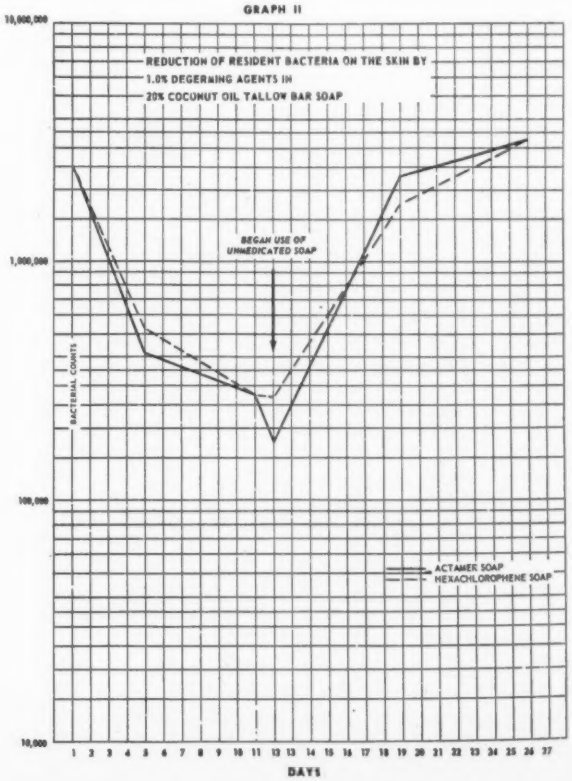
	Dilution of Actamer in PPM					
Test Organism	*1000*	*100*	*10*	*1.0*	*0.1*	*C*
Lactobacillus	—	—	+	+	+	+
Diplococcus	—	—	—	—	—	+
Brucella	—	—	—	—	—	+
Aerobacter	—	—	—	+	+	+
Proteus	—	—	+	+	+	+
Pseudomonas	+	+	+	+	+	+
Escherichia	+	+	+	+	+	+
Saccharomyces	—	—	+	+	+	+
Trichophyton	—	—	—	+	+	+
Epidermophyton	—	—	—	+	+	+

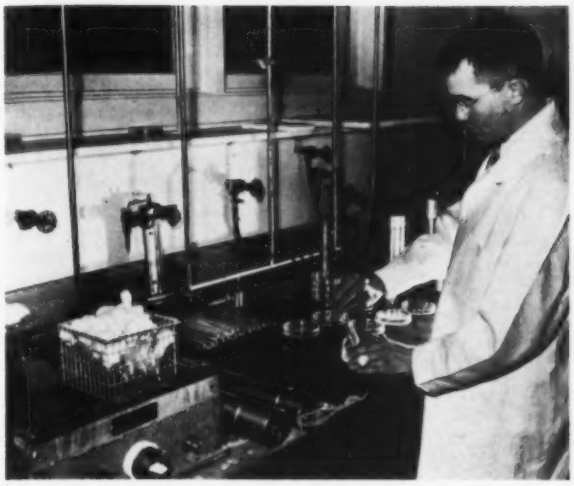
+ = Growth, – = Complete inhibition of growth.

GRAPH I



GRAPH II





Nutrient agar on which microscopic bacteria could feed was added to samples of water used. After 48 hours of incubation the bacteria could be counted and the number on the tester's hands calculated.

phenolic compounds are likewise inhibited by body fluids (7).

Both antibacterial activity and skin substantivity are necessary properties of a skin antiseptic for use in soaps and cosmetics. Whether or not these factors are present in adequate proportions is best shown by the degerming efficiency of the product.

A number of methods have been proposed to accurately measure degerming activity and most of them stem from a basic technique recommended by Price (8) in 1938. Price showed that the number of bacteria on the skin was reduced at a constantly diminishing rate when the skin was repeatedly scrubbed in a series of different wash-basins. This technique has since been modified many times (7, 9, 10, 11, 12, 13).

We used for these studies a modified Cade technique. The Cade technique was chosen because it is widely used as a gauge of the efficiency of medicated soaps in lowering the number of bacteria on the skin.

The results presented are based upon two series of tests, one carried out by a consultant laboratory* using male university students as subjects, and the other carried out in our own laboratories using both male and female employees. Subjects in both series of tests were carefully selected to make certain that they were normal physically, sincere and cooperative, and had not used soap or cosmetics which contained an antiseptic for at least three weeks prior to the test.

Following the initial washing test to determine the normal bacterial count, subjects were instructed to use the test soaps at least three times daily, for a period of two weeks. Bacterial counts were made again on the 5th, 11th and 12th days of the test. A minimum of five subjects was used for each test soap. Since the detailed technique for determining the individual bacterial counts is rather lengthy, the reader should refer to the original descriptions (13, 14).

The results of these handwashing tests can be interpreted by different methods some of which have recently been outlined by Cade (14). By none of these techniques can the transient and resident bacteria be completely differentiated, for both types are present in every wash basin. In each succeeding basin, however, fewer transient bacteria are present in proportion to the number of resident bacteria.

The number of transient bacteria varied from individual to individual and from one time to another for the same individual more than the resident bacteria. In appreciation of this more consistent behavior, and because resident bacteria are the ones most difficult to remove (15), the degerming activity based upon comparisons of the resident flora was considered most accurate and most factual.

Of the numerous methods of interpreting the results of such tests we favor comparing the bacterial count of the 5th basin on the last day of the test with the bacterial count of the 5th basin on the first day of the test. By this technique, one encounters a minimum of interference from transient bacteria, most of which are removed in the first four basins. The use of additional basins contributes little information because bacterial reduction progresses at a relatively constant rate after the 5th basin and the numbers become so low that differences in successive basins are relatively insignificant (13).

Actamer reduced the resident flora of the skin (based on the 5th basin counts) by an average of 97.4% in a series of twelve subjects when it was incorporated at a 2.0% level in a high-grade 20% coconut oil-80% tallow bar soap. The percent reduction was about 94% when Actamer was tested in soaps at a 1.5% level but still reduced the resident skin flora by almost 92% at as low a level as 1.0% based on the weight of anhydrous soap in the formulation.

Since soap containing Hexachlorophene has been suggested (16) as a standard for estimating the efficacy of antiseptic soaps, results with both Actamer and Hexachlorophene are portrayed graphically at 2.0% levels in Graph I and at 1.0% levels in Graph II.

The reduction of the bacterial count at each test interval for each subject was calculated on a percentage basis. For maximum accuracy the average reduction for each group of subjects using the same test material was then determined as the average percent reduction rather than the average numerical reduction. In this manner equal weight for each subject is reflected in the average for the group.

In order to more clearly present these data graphically, a normal resident count of 2,500,000 was selected and other points on the graph were determined by calculating the percent reduction on the basis of this initial number. Since the average initial count for each group of subjects was between 2,200,000 and 2,800,000, this adjustment allows perspicuous comparison with minor alteration in accuracy.

To determine the effect exerted by the sulfur linkage in Actamer, its degerming activity was compared to that of the methylene analogue 2,2′-methylene bis (4,6-dichlorophenol). The comparative bacterial reduction with these two compounds is recorded in Graph III. Actamer, bridged by a sulfur atom exhibited better skin degerming activity than did the methylene-bridged analogue.

In Graph IV, numbers of resident bacteria in the 4th and 5th basins after twelve days use of medicated soaps are recorded. The numbers present after identical use of an unmedicated control soap is included for better

* Columbus Laboratories, Chicago, Ill.

orientation. The differential in degerming activity of the three test materials was considerably greater than the differential in antimicrobial properties demonstrated *in vitro*. The results therefore, substantiate the previously made premise that degerming efficacy is dependent upon both anti-microbial and substantive properties.

In Graph V, the degerming activities of Actamer and two other bis phenolic compounds in varying concentrations are represented by comparing the resident counts (5th basin) of the 1st day with the resident counts (5th basin) of the 12th day of the tests. The strikingly low differential in degerming activity of the soaps containing 1.0, 1.5 and 2.0% Actamer may indicate a rapid and cumulative build-up of residual Actamer on the skin due to strong substantive properties.

Discussion

The data which has been presented on Actamer shows this compound to have an ideal combination of physical, chemical, pharmacological and antimicrobial properties to make it effective as a cutaneous antiseptic.

Bacteria are known to become adsorbed onto the surface of the epithelium, fill up small cracks and crevices in the skin and become lodged down in the glandular ducts. It is now generally acknowledged that some of these bacteria can utilize certain fractions of the sweat as sources of their own nutrition and in so doing, change it from an essentially odorless material into one with an offensive odor. When the metabolism of these bacteria is inhibited by a bacteriostatic compound such as the one which we have described, they cease to multiply. Some of the bacteria are undoubtedly killed by the antibacterial agent and the natural defense mechanisms of the body (17). Others may be flushed out of the glandular ducts and hair follicles by the natural secretions of the skin glands.

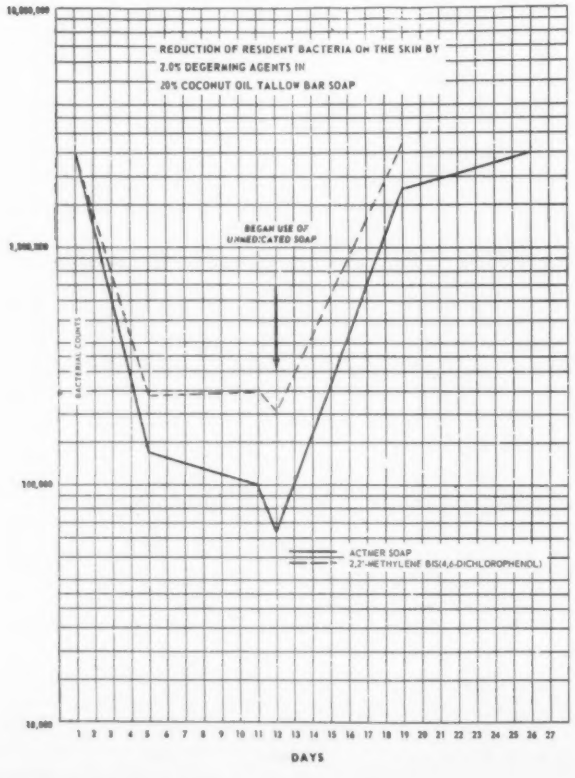
We are also obliged to recognize that these sweat glands are primarily excretory organs and that their normal functioning is of importance in eliminating waste products as well as in regulating the body temperature. Bacteriostatic deodorants may augment this excretory mechanism by removing bacteria from these channels and allowing a more normal flow of perspiration.

Needless to say, a skin bacteriostat such as we have described also effectively controls many bacteria and fungi commonly found on the skin which can act as potential pathogens.

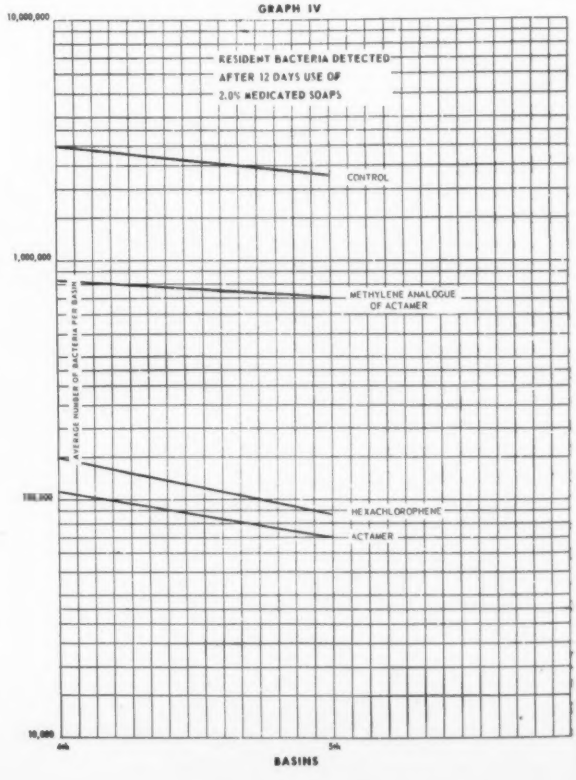
The ease of formulability of Actamer and its apparent good stability permit its incorporation into many types of medicated and deodorant soaps and cosmetics products. Its low toxicity, unexcelled ability to clear the skin of bacterial contamination and comparative economy can be expected to make it a common ingredient of deodorant or medicated soaps.

A trend which has become more and more apparent in the cosmetic industry over the past decade is the attention which has been given to insure complete lack of irritation or other manifestations of toxicity. More emphasis is now being placed on products to augment nature's means of bringing out the inherent beauty of the healthy integument as well as to mask imperfections. Since the bacteria present on the skin can be harmful and produce offensive odors, agents which eradicate these microorganisms from the skin without causing harm to the skin should find many useful applications

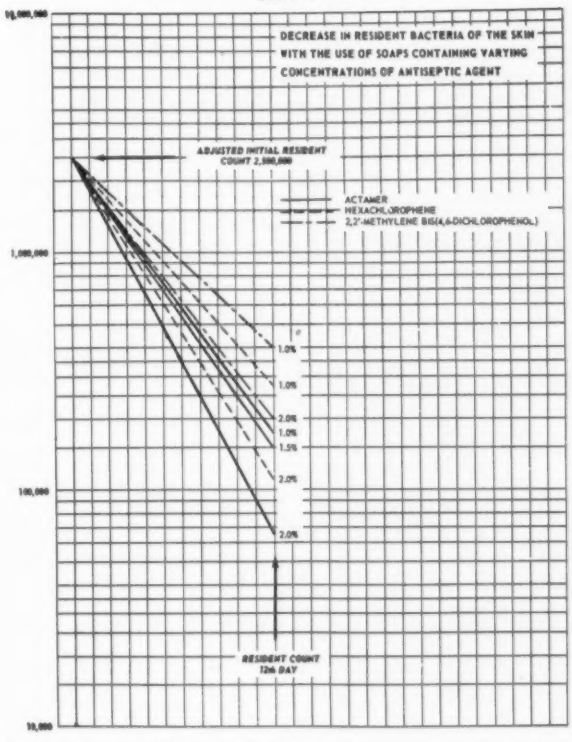
GRAPH III



GRAPH IV



GRAPH V



in a large variety of finished cosmetic and soap products.

Summary

A unique synthetic bacteriostatic agent, 2,2′-thiobis (4,6-dichlorophenol), herein referred to as Actamer, has been described. It is a colorless, tasteless and essentially odorless white crystalline powder and is practically insoluble in water but quite soluble in a number of organic solvents commonly employed in soaps and cosmetics. Accelerated and unaccelerated tests have demonstrated its good stability in a wide variety of formulations.

The antimicrobial activity of 2,2′-thiobis (4,6-dichlorophenol) has been demonstrated by both *in vitro* and *in vivo* techniques. It is particularly effective against the gram positive cocci that makes up a large proportion of the normal flora of the skin and which are believed to cause body odor and skin infections. *In vitro* tests have likewise shown this compound to have good activity against some pathogenic fungi.

In vivo, 2,2′-thiobis (4,6-dichlorophenol) in bar soap at a concentration of 2.0%, has been shown to reduce the number of resident bacteria on the skin by 97.4% after 12 days daily use. At 1.5% concentration approximately 94% reduction was effected. A concentration of 1.0% gave almost 92% reduction.

Tests described herein indicate that the cutaneous toxicity of 2,2′-thiobis (4,6-dichlorophenol) was low for this type of compound and indicates safety when used in any topically applied detergent, cosmetic or pharmaceutical product.

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To withdraw from useful activity is to withdraw from life. The man with a million dollars and no work is not enviable, because indefinite leisure is flavorless.

Cosmetic Excise Tax Collections

COSMETIC excise tax collections for the years of 1950 and 1951 and also the collections for the months of 1952 so far issued are given in the table following:

		1951	1950
January	$11,547,853	$12,255,363	$ 9,836,052
February	14,338,420	12,867,842	11,654,681
March	7,248,879	8,534,569	6,811,063
April	8,218,865	5,746,348	6,985,099
May	9,174,622	9,293,461	8,316,993
June	8,253,649	8,622,275	8,136,742
July	9,357,443	8,901,311	7,965,373
August	8,849,488	10,252,706	9,671,335
September	8,523,241	7,698,854	7,542,472
October	8,439,370	9,365,932	7,900,314
November	7,878,976	8,916,488	8,159,612
December		8,974,245	7,781,091

"These are our counter-punch twins. The chlorophyll neutralizes the perfume odor."

Scenting Cosmetic Preparations

DR. STEFAN A. KARAS

The role of perfume in cosmetics . . . Practical suggestions for perfuming creams, lotions, face and body dusting powders

HITHERTO, the question of scenting of cosmetics has received considerable attention, but primarily it has been considered from the viewpoint of creating a lovely, harmonious, original perfume note. Important as the art of perfumery is, the proper application of perfume to cosmetics presupposes above all else a full knowledge not only of the type of cosmetic in which the perfume is to be used, but particularly of the nature of the ingredients of that cosmetic. The divorce of the arts of perfumery and of cosmetic chemistry which has come about in America even more than in Europe is disastrous in its consequences.

Who need emphasize the importance of scent in the acceptance or rejection of a cosmetic by the consumer? For cosmetics must be given the first all-important judgment on the basis of smell. True, appearance attracts the eye, but the cosmetics usually cannot be sampled, they can only be smelled. And, almost as a reflex physiological action, a package is brought to the nose to be smelled. Or, take the use of the product, particularly on the face. The nose is and must be the deciding factor in determining whether the human being is willing to tolerate a "foreign body" (as a cream is) on the face.

Role of Perfume

Although perfume is but a small part, percentage-wise, in cosmetics, its role is tremendously important, and sometimes as decisive as it is invisible. Even in panel-testing or consumer-testing of cosmetics, most of the people judge primarily by the smell. Some people have gone so far as to suggest that unperfumed materials should be tested, so that odor does not become a distracting factor, but this would be creating an unreal situation, as the final product, when ready for use, would always be perfumed.

Let us start by disputing a long-accepted tenet. By many it has been considered an established fact that the chemist and perfumer can cover any ingredient by the use of a sufficient quantity of a carefully blended and properly selected perfume. In my judgment, this is far from the truth. And, because there are many ingredients that defy odor coverage, or can be covered only with grave difficulty, an attempt should be made

to choose products that are odorless, whenever possible, or that have a rather pleasant and acceptable smell. Unfortunately, within the arsenal of raw materials at the disposal of the chemist, one does not always find pleasant-smelling ingredients. Some are neutral, some actually odorless (these are ideal), some pleasant, several very unpleasant.

Lanolin and Beeswax

For instance, everyone knows the important place occupied by lanolin in creams, lotions, foundations, and other cosmetics. Lanolin, however, when it is not properly purified through the processing of wool grease, will offer great difficulty to the perfumer seeking to cover its smell. It will interfere with the odor that he is trying to create, and will require not only modifications of a perfume formula but large quantities of the scenting materials, which means additional expense.

Or, take the case of beeswax. The odor of beeswax is not unpleasant, but it has a characteristic note of its own, a note that is difficult to harmonize with perfume ingredients. The same is true of spermaceti, especially if it has a slight amount of fish odor that has not been entirely removed in the course in processing and purification. This characteristic comes up with the passage of time, becoming more and more evident, and to that extent it actually can overcome the perfume during the period of shelf-storage.

Ingredients that Weaken Odor

Then there are raw materials widely used in cosmetics that are not particularly odorous themselves, but they tend to dissolve the perfume "so intimately," that the final effect is to weaken the odor. This is the case of almost every quality of mineral oil. Therefore, if a mineral oil is present in a product to the extent of more than ten per cent, the percentage of perfume should be correspondingly increased, because otherwise, due to the dissolution of the perfume, the latter becomes so weak that it tends to disappear entirely.

Covering Castor Oil Taste

Castor oil, on the other hand, is a highly odorous product, and furthermore offers another drawback, namely its taste. Both of these qualities are modified by the perfume (or flavor, if one prefers, but actually in this case perfume and flavor are one). Thus, the odor-taste of caster oil in a lipstick can be effectively covered, but even more important than the selection of the perfume is the selection of the raw material itself. Any caster oil not made especially for lipsticks presents an odor and taste impossible to cover. Castor oil of a cosmetic grade must be made with special purification and filtration, and to use any caster oil not so made, even the best U.S.P. pharmaceutical grade, will defeat one's purpose because of the problem of perfume coverage.

Emulsifying Agents

Some of the newest emulsifying agents present an almost impossible coverage task; among others, mention might be made of some of the most serious troublemakers: the derivatives of sorbitol (particularly the oleates and palmitates); polyoxyethylene sorbitan oleates and palmitates, and other unsaturated fatty acid sorbitol derivatives. Incidentally, the laurates are not as difficult for the perfumer to handle as are the above-mentioned materials. To determine the reason for such difficulty is not simple; it may be that carmelization or carbonisation takes place, giving a by-odor which is difficult to cover. Furthermore, the lanolin derivatives of polyoxyethylene might be considered as having the same objectionable factor. Nevertheless, these are some of the most important emulsifying agents, and many of them have been accepted in formulas with great success, being placed into products that have enjoyed enviable commercial acceptance.

Before proceeding to some of the major cosmetics that present difficulties in their scenting, let us mention one more ingredient that is likely to produce troublesome problems for the perfumer: namely, lecithin. This is a raw material particularly difficult to handle when the process of manufacture of the cosmetic calls for heating a mixture to temperatures close to 100°C. The lecithin in such a case has a tendency to give off by-odors which require more than ingenuity on the part of the perfumer who seeks to cover them, for some of these by-odors present a challenge that actually defies solution.

Perfuming Face Creams

Now, let us proceed to take up the problems of perfuming certain major cosmetics, starting, for example, with face creams. Almost all face creams, whether they are night creams, nourishing creams, or emollient creams, contain a large percentage—up to thirty per cent—of oils and waxes. Such ingredients, by their very nature, require an increased proportion of perfume, not only because of the necessity of coverage of the waxes and oils, but also in order to obtain a pleasant first impression of smell to predominate over the other odorous ingredients in the formula.

Furthermore, the character of such creams calls for the presence of lanolin, creating new and other perfume problems, as mentioned in the brief discussion of that raw material.

What type of a perfume should be put into a face cream? It is my considered opinion that a small percentage of a so-called oriental-type formula should be used, containing perhaps certain predominant ingredients, such as sandalwood, bergamot, patchouli, vetivert, and a small amount of thyme and/or rosemary, preferably using musk as the fixative. Such natural ingredients must of course be modified by the use of aromatic chemicals, and a proper quantitative formula worked out for the specific needs.

The classic floral odors, like rose, jasmin, lilac, and others, cannot be recommended for face creams, because there is a fundamental disharmony between such odors and the predominant odors of the necessary raw materials.

Aromatic Chemicals

Of the aromatic chemicals that might be chosen for modification of the natural materials in the oriental type, one should particularly mention, among others, linalool, terpinyl acetate, hydroxycitronellal, and phenyl ethyl alcohol. Modification of the naturals with these materials becomes necessary in order to harmonize the scent with the ingredients used in the cream.

How the perfume should be applied is a matter of extreme importance. If the perfume is to be added at a high temperature, it will either be partially volatilized or some of the ingredients in the perfume mixture can be destroyed, thus requiring some two to three times as much of the odor in order to give the same final effect. That this is wasteful goes without saying, and therefore the manufacturing process should be worked out in such a manner as to avoid subjecting the perfume to high temperatures. If the temperature must be raised while perfuming, the ordinary proportions will prove insufficient. It is best to perfume face creams while mixing, at temperatures between 50 and 60° C., and using proportions of 1 to 2 per cent. The perfume in such a process is brought into the emulsion and is kept undissolved between the hydrophilic and the lipophilic phases.

Another aspect in the perfuming of face creams that must be kept in mind is the alkalinity of the product. Ideally, if perfume were the sole product under consideration, a pH of 7 to 8, or close to the neutral point, should be maintained. Particularly during long shelf life, a more alkaline product destroys the strength of the perfume; in other words, the perfume cannot be expected to last over as long a period of time at a high pH as when it is close to the neutral point.

Discoloration Done to Perfume

Furthermore, in considering the question of the discoloration of a product due to the perfume, this is intimately associated with the matter of alkalinity, with products of higher pH tending to be discolored more easily by the aromatic constituents than those closer to neutral.

Dispersion

A final aspect of the perfuming of a face cream is the matter of dispersion, so that there is no undue concentration of the scent in any one section of the cream and a lower amount in another. This can be accomplished by continuous mixing for at least one hour, at the same time as the warm (but not hot) temperature is maintained.

A lower percentage of perfume is required when one deals with lotions—hand lotions, suntan lotions, hair lotions. This proportion can be lowered to about 0.5 per cent, rising as high as, but not higher than, 1 per cent. If the product contains a high percentage of water, it is logical that, since water is both odorless and inert, the lotion will require only a smaller percentage of the perfume.

Scenting Lotions

Lotions, in contrast to face creams, should be lightly scented with the classical florals, particularly rose, jasmin, and lilac, or even lighter notes among the florals, such as muguet. There is no problem of the coverage of such lotions with heavier scents, because the dispersing agents and ingredients are self-emulsifying, being such materials as diethylene glycol monostearate, polyethylene glycol stearates, such emulsifiers as duponol, triethanolamine derivatives of fatty acids (except the oleates) and others that are relatively easy to perfume.

The addition of the perfume should be accomplished in a manner similar to that for face cream; the aromatic mixture is added while the entire lotion is being slowly stirred, and finally the product is put through a colloidal mill.

DR. STEFAN KARAS, consultant, is the author of this seventh of a series of articles on primary functions of cosmetics.

Perfuming Face Powder

More skill is required in the perfuming of face powder than of any other of the more widely used cosmetics. Several reasons for these difficulties become apparent; among them: (1) face powder consists of aggregates of small particles, containing large percentages of air, the latter acting at all times on the perfume, tending either to cause it to volatilize or to be oxidized; (2) the ingredients of a face powder are of a mineral nature; therefore, they do not dissolve the perfume, they adsorb it.

The change of temperature during the preparation of the powder plays an enormous role in the physicochemical contact of the ingredients with the perfumes.

A prerequisite for the tinting of face powder is the use of mineral colors, which not only have a deleterious effect on many perfume formulas, but which in turn are themselves affected by such perfumes. The perfume very often is the cause of a change of color, and this may be a discoloration in the form of making the color lighter or darker. Probably, the colors act as catalytic agents, setting off a reaction between the perfumes and other materials.

Although most face powders are made from certain standard ingredients, these materials are available in qualities that differ considerably so far as the purity of the odor is concerned. Take, for example, the talc, with its earthy odor; or the kaolin, with its typical clayey smell. Unusual care must be taken in choosing these ingredients; it is not enough to test the physical and chemical constants in the ordinary way, but one must also test the olfactory qualities. Added to these materials are the semi-organic ingredients, such as magnesium stearate, zinc stearate and allied materials, which only too often have a by-odor of their fats, or that may have by-odors resulting from insufficient care in their processing.

It can thus be seen that there is a variety of ingredients in the face powder and a variety of ingredients in the perfume. The choice of perfume is often not within the domain of the chemist, or even the perfumer, but rests with management, with advertising, sales, and marketing men, who frequently decide to borrow an idea from a successful odor already on the market. However, most face powder formulations should contain some of the heavier type of perfume ingredients,

in order to impart long-lasting qualities. This lasting effect is not to be interpreted in the sense of an odor remaining for a relatively long period of time after the powder has been applied to the face, but rather than the powder should continue to be odorous for a long period while it remains in the box, and particularly once the box has been opened. Particularly important in imparting this heavy and lasting quality are the musks and the resins and oleoresins. It is my experience that face powder perfume should always contain at least ten per cent of such products, which in this case can be considered as acting as fixatives. Nevertheless, such ingredients in no way restrict the variety of odor characters that can be created. Starting with vanillin and coumarin, for example, floral notes can be built; and in the same way, with the musks and resins, one can go in the direction of orientals, heavy florals, bouquets, and others.

A formula for a face powder perfume cannot be said, in a general way, to contain few or many ingredients. Some of the better formulas have been built with very few materials, while others had from 20 to 50. Whatever the number, the perfume itself can usually be used in a quantity of approximately 1 per cent.

What has been said for face powder can be repeated for talcum powder, except that the character of the talcum powder perfume should always be floral. This is apparently dictated by usage and fashion, and it is derived from the fact that the talcum and particularly the bath powder is used in generous quantities and all over the body. Although not used as close to the nose, and not applied in public, the body powder is used in large amounts, so that any but a light odor would hardly be acceptable.

When the bath powder contains a very high percentage of talc—it often reaches as high as 90 per cent—with the balance consisting of deodorizing or perspiration-absorbing ingredients—the product is easily covered by essential oils and aromatic chemicals of a light and sharp nature. A simple formula can be constructed that has as the predominant note terpineol, benzyl acetate, hydroxycitronellal, all modified by the use of several essential oils and well-chosen although sparingly used fixatives.

(In the next article the scenting question is continued with a discussion of lipsticks, bath preparations, depilatories and permanent wave sets, and with some general remarks on such questions as overperfuming and the problems encountered in the perfuming of an entire line).

Customers are Moving

ONE of the errors that business men fall into is thinking of their markets as relatively stable. This leads to the belief that it isn't too essential to do much advertising. "After all," goes the argument, "I've been in business many years at the same location. My customers know where I am and what I sell. Why waste a lot of money on advertising?"

But, here are the facts: over 36,000,000 people will move from one city to another this year—an increase of about 20% over last year's record-breaking total. This represents *nearly one-fourth* of the population.

Moreover, according to the head of a New York City moving company, 70% of the families move from one town to another at least once every 10 years. Biggest shift is from big cities to suburban communities; and from the East and Midwest to the South, Southwest and Pacific Coast. California and Texas are gaining most rapidly, with at least two people moving in for every one leaving.

So, when making your advertising plans, just remember: at any one time, perhaps 25% of your *potential* customers never heard of you before.—*Newsletter, U. S. Chamber of Commerce.*

Value of Experience

NOTHING can take the place of experience. The older we grow, the wiser we become, and the greater our respect for character and reputation. To our regret we find that things are not always what they seem—that certain men and organizations are not deserving of our confidence and support. Thus, it is the most natural thing in the world to turn to a recognized physician when we need medical attention . . . to select a dependable bank to entrust with our savings . . . to deal with men and organizations that have served us long and well. You have a character and reputation to maintain—so have we. To risk your (or our) good name by using inferior materials or unskilled labor is poor economy. Satisfaction, success, security, and peace of mind depend almost entirely upon dealing with tried and tested men and organizations . . . friends!—*Phoenix Flame.*

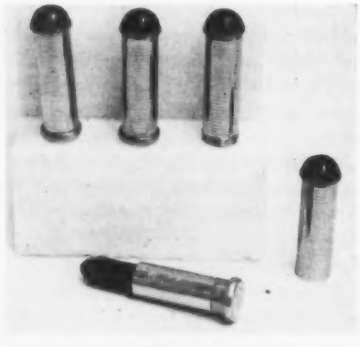
Bourjois display-box

BOURJOIS' Carnival of Values consists of a series of Trios, combination packages of three products, retailing together for $1 per set. One set contains Evening in Paris, Endearing, and Mais Oui perfumes in a red patent purse kit, another contains half ounce bottles of cologne in the same fragrances, and a third contains three cologne sticks in the above scents, packaged in a gold foil carton with open window.

SEAFORTH offers a special kit-pack with its shave lotion and Stavo spray deodorant for men at 89 cents instead of the regular $1.18 price. The combination is being advertised on radio, television and in magazines.

HARRIET HUBBARD AYER offers a trial jar free of extra cost with every regular $3.50 jar of its Formulayer cream. The promotion will be backed by consumer magazine advertisements.

HELENA RUBINSTEIN offers its indelibase lipsticks, in any of fourteen shades, in jeweled cases. The price is $1.25.



Indelible Rubinstein lipsticks

PRIMROSE HOUSE will distribute the Hartnell perfume and toilet water line in the U.S.

MARY CHESS has scheduled its annual toilet water promotion, featuring the four ounce, $2.75 bottle of toilet water for $1.50 and the $1.00 atomizer for 75 cents. The promotion will start April 24 and continue through May 30. Eleven fragrances are available.

LENTHERIC has planned a Red Lilac promotion, to feature national and co-op ads, a Red Lilac Beauty Queen Contest, a Charles Spivak Red Lilac Waltz record, a Red Lilac waltz by Arthur Murray, and college proms featuring Red Lilac waltz contests with Red Lilac prizes. Tie-ins will include Marvella Pearls, Mona Lisa Girdles, the International. Handkerchief. Co.,. Glentex

Lentheric's new Cream Sachet Perfume

Scarves, American Furniture Co. of Martinsville, the Society of American Florists, and personal appearances of Metropolitan Opera star Jean Madeira in a selected number of department stores. The line includes Perfume, Perfume Extract, Bouquet, Icicle, Bath Powder, Lipstick, and the new Cream Perfume Sachet, in a ½ oz. squeeze bottle, at $1.65. The national advertising, to break in March, will emphasize the Cream Perfume Sachet and the lipstick.

ANATOLE ROBBINS is reported to be planning a promotion for its Prismatic Lipstick, with one single shade for blondes, brunettes, and redheads. It sells for $1.50.

W. O. WASHBURN & SONS has contracted Central Agency in New York City to handle eastern distribution of "Pillows" containing its Balm Argenta hand lotion. Each Pillow contains an individual application of hand lotion in an aluminum and "Pliofilm" packet and are packaged eight to a match-

✶ New

book-like folder. Three of these folders, containing a total of 24 applications, are packaged together in a boot selling for 25 cents. The packages are self-paying samplers for the four ounce size of Balm Argenta, at 50 cents, and the 10 ounce size at $1.

ANGELIQUE adds Lotion Cologne Trio in its Satin Series. One ounce bottles of Black, White and Gold Satin Lotion Cologne are packaged in a golden gift box, at $3.

PHENEX LABS., INC. is distributing Slip Ease, a new liquid product to be added to rinse water for eliminating static electricity in washable fabrics. It comes in Duraglas bottles and plastic closures of the Owens-Illinois Glass Co. and is sold at drug, lingerie and notion counters.

POND'S offers variety and drug stores a new Dry Skin Cream easeled color card for window display. Consistent with current advertising, it is the first of the company's pieces to desert the featuring of pretty girls. Pond's also has a new self-help lipstick display available for the retail drug trade. A full-color, three-

New Pond's display approach

dimensional easeled card, it holds 2 dozen 29 cent "Lips."

COLGATE-PALMOLIVE-PEET CO. is tieing in with the current Walt Disney movie Peter Pan by introducing Peter Pan chlorophyll soap.

Packaging & Promotions

New make-up kit

WADSWORTH is introducing Pandora, make-up kit in an evening bag. A black velvet evening bag holds a cylindrically designed case kept in place with a gold band. The case has a mirror, compact, lipstick, comb and cigarette compartment. There is also a pocket for extras in the satin lining of the bag. The entire kit is packed in a black and gold box with a gold paper laminated tray, designed by W. C. Ritchie and Co. The case itself comes in any of six treatments. The complete package sells for $17.50 and up.

PRINCE MATCHABELLI, in observance of Easter and Mother's Day, packages its line of purse-size perfume dispenser with a bouquet of hand-detailed flowers in a miniature florist's box with transparent lid. Matchabelli's Sparkle 'n Spice duo consists of a one ounce flash of Sparkling Burgundy Bubble Bath and one ounce flask of Potpourri Cologne in a lemon-tinted gift box at $1. Matchabelli also introduces Abano Bath Oil Traveler, in a ⅝ ounce leakproof bottle with dispenser type opening and topped with a brass screwcap, in aqua-colored box, it sells for $2.50. All above packages will be marketed from March 1 to June.

WEST DISINFECTING CO. has introduced a new line of antiseptic protective vanishing creams. Containing hexachlorophene, these creams are said to inhibit staphylococcus aurens and to be almost neutral in pH. In 12 oz. tubes, 211 is oil resistant, water soluble for protection against dust-borne irritants, viscous oils, grease and grime; 311 is water-resistant for protection against dilute acids and alkalis, and 411 is solvent-resistant, water soluble for protection against organic solvents, acetates, cooling and cutting oils of low water content. A polystyrene Liquicreme Dispenser is designed to supply a pre-determined amount of cream with each stroke of a lever.

REVLON will sponsor the Jane Froman televion program.

LANCOME is introducing a new fragrance line, Graces du Printemps,

Lancome's double-spherical bottles

centering around spring, summer, and autumn, with scents called, respectively, Graces de Printemps, Joyeux Ete, and Bel Automne. It is described as "perfume-divided or toilet water-multiplied". The bottle is formed like two compressed spheres, one on top of the other, with round depressions near the bottom for a good grip. It sells for $3.50 per four ounces, or $6 per eight ounces.

New Factor package

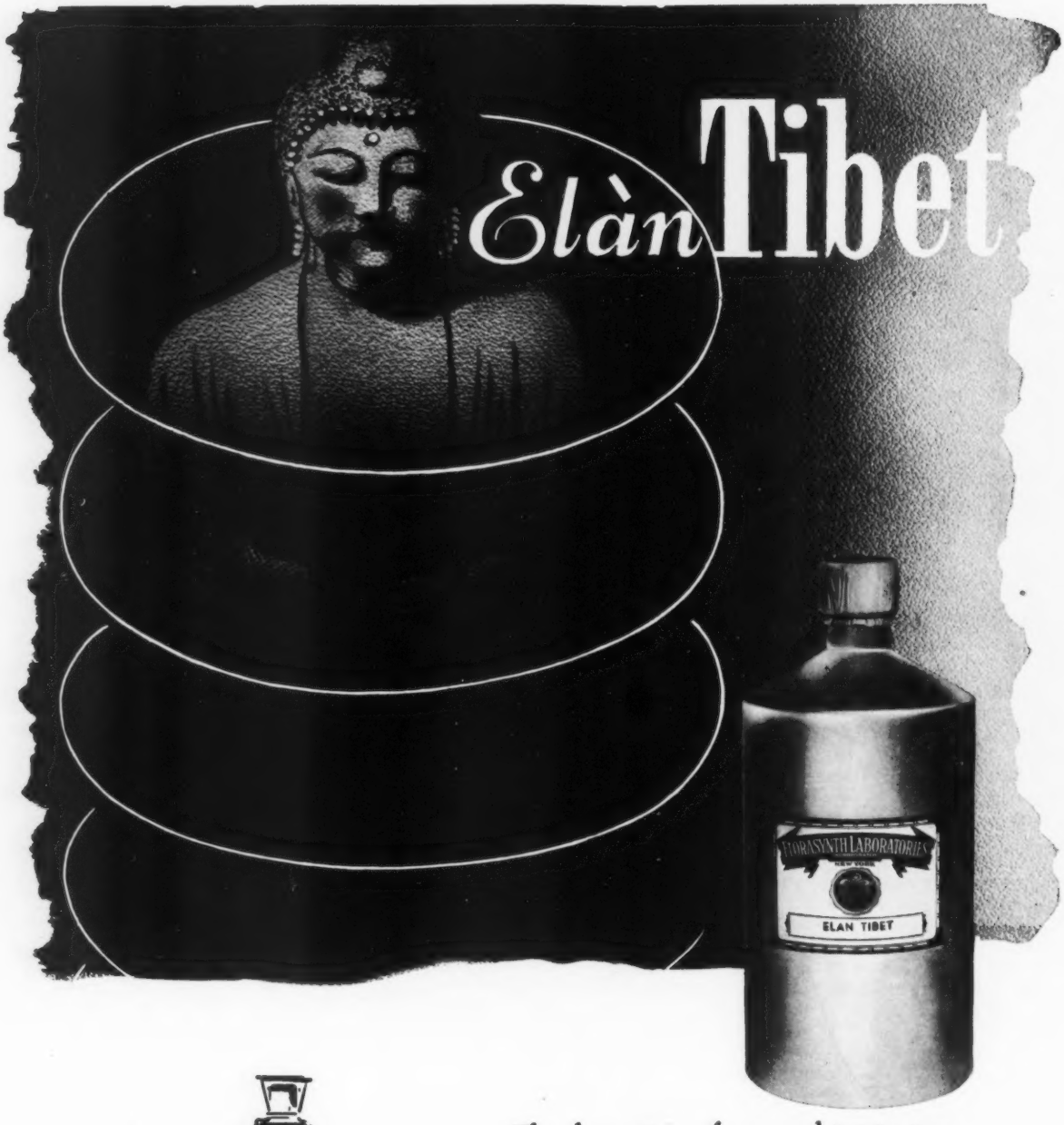
MAX FACTOR's Creme Puff, its new combination make-up base and powder in mirrored compact, is now being distributed. Available in five shades, it sells for $1.25. A pre-pak unit includes a counter display containing 12 units, plus an additional 12 units for stock.

HARRIET HUBBARD AYER is promoting a new cream ingredient, Extrolan, described as a chemical compound with emollient properties exceeding those of natural lanolin.

FRANCIS DENNEY is introducing Hope perfume. It retails at $5 per ¼ oz., $9.50 per ½ oz., $17.50 per 1 oz. The scent is also offered in Toilet Essence at $2.75 per 2 ozs., and $5 per 4 ozs.

ANN DELAFIELD'S new eight-piece cosmetic line is being distributed exclusively through Rexall stores across the country. The line includes an All-Purpose Deep Cream, at $1.50 and $2.75; Skin Freshener, at $1.50; Concentrated Cologne, at $2.50; Face Powder, regular and compressed, with built-in foundation (five shades), at $1.50; the Glamour Eyes Compact, a complete kit containing mascara, eye shadow, eyebrow pencil, and eye-liner in white plastic ($2.00) or gold metal ($5.00) purse case with hinged mirrored lid; and indelible lipstick (five shades), at $1.25. The line also includes vitamins at $2.95 for a one month's supply. Promotion centers around the line's simplicity. Extensive national magazine advertising has been scheduled.

Eight piece Ann Delafield line



Floral creation of unusual intriguing odor... suggestive of the subtle charm and mystery of the native background with an appealing character that lends delicate bouquet to toilet waters and perfumes.

Samples upon request

Florasynth LABORATORIES INC.

CHICAGO 6 · **NEW YORK 61** · LOS ANGELES 13

DALLAS 1 • DETROIT 2 • MEMPHIS 1 • NEW ORLEANS 13 • ST. LOUIS 2 • SAN BERNARDINO • SAN FRANCISCO 11

FLORASYNTH LABS. (CANADA) LTD.—MONTREAL • TORONTO • VANCOUVER • WINNIPEG • FLORASYNTH LABORATORIES DE MEXICO S. A., MEXICO CITY

COTY has combined its treatment items and make-up foundations in pairs and is retailing them at ⅓ less than the regular combined list price. Introduced in the pairs is "Instant Cleanser", a creamy liquid cleanser in a white plastic squeeze bottle with blue cap and gold lettering, which sells separately for $1.50 per 6 ozs.

LENEL CO. offers Trifling Dusting Powder and one dram of Perfume Lenelette at $3.25 through March.

NOXZEMA will co-sponsor Boston Blackie.

HOUBIGANT is marketing a new anti-perspirant, Chantilly Liquid Cream

Houbigant's new anti-perspirant

Deodorant. In a plastic bottle fit for traveling, it sells for $1.

LANVIN PERFUME, INC. will tie in with a motion picture, "Moulin Rouge". An article in a current issue of The New York Herald Tribune relates how the firm managed to become reestablished following the war, while still maintaining its exclusiveness. The article states that this was achieved by advertising in slick fashion magazines and others in the quality field; by a campaign with leading stores across the country with a significant perfume advertising budget; some radio and television; sales representatives in top stores; output limited to five fragrances, with Arpege kept super-exclusive; a toilet water and dusting powder, and this year a talcum powder in the five fragrances, with one item being introduced each year. Output is carefully controlled and kept below demand, it continues: "For instance, this March the two-ounce bottle of My Sin will be promoted for one month. The company could sell 500,000, but only 100,000 will be sent out, and there will be no reorders . . . Despite its exclusiveness, sales have reached the $3,000,000 mark."

NORTHAM WARREN CORP., to concentrate its sales efforts, is planning to reduce the number of shades and items in its lines, and to limit its major promotions to three in 1953. Also being planned are a 30 per cent increase in Cutex advertising and new packaging and revised formulae for the Odorono line, to be backed by the "heaviest single advertising campaign in the local daily newspapers ever placed behind a deodorant of any kind or type."

JAQUELINE COCHRAN is launching a new fluid make-up base, Drama Sheen, at $3.

MENNEN CO. has announced a nation-wide Twin-Pak promotion, which consists of two 33 cent tubes of Lather Shave for 43 cents, and two 29 cents tubes of brushless for 39 cents.

CARTER PRODUCTS, INC. is introducing its Arrid deodorant with non-staining pastel green chlorophyll in the Midwest.

ELECTRIC DEODORIZER CORP. is distributing Odor-Master, an electric chlorophyll deodorizer, through department, drug, hardware, food and variety stores. Molded of phenolic plastic, it holds two chlorophyll wafers, lasting about 100 hours, and is plugged into standard electrical outlets. The unit sells for 99 cents, the wafers are 49 cents per vial of six.

THEON CO. is distributing a package containing mascara—in any of three shades—in a vial, and Magicomb applicator for combing onto lashes. Called Lashbrite, it sells for 25 cents. "4711" LIMITED presents a new blue and gold injection molded plastic counter display and tester stand free to dealers who purchase $40.00 retail of "4711" merchandise.

CHARLES ANTELL, INC. offers new Liquid Creme Shampoo with lanolin and hexachlorophene. Packaged in an eight ounce container, it sells for 98 cents.

DERMETICS will launch Place & Show Pressed Powder Palette, a new watch-shaped shell pink compact

Dermetic's pressed powder compact

containing any one of five shades, at $1.25, starting March 10.

ELIZABETH ARDEN offers Skin-Deep Milky Cleanser in a milky plastic bottle in 8 and 16 oz. sizes for $2.25 and $4 respectively. The house is currently promoting its suntan preparations for the winter sports enthusiasts.

PARFUMS CORDAY offers, for a limited time only, 'Quaintance Quartette, composed of Fame, Toujours Moi, Zigane and Jet fragrances, in a silver and grey suede case. It sells for $2.

LADY ESTHER, LTD. offers a free month's supply of face powder in a five shade testing kit to every customer purchasing its Four Purpose Face Cream. The firm also offers a Complete Creme-Make-up free good deal to all Canadian accounts. Both offers expire April 1.

RILLING DERMETICS is planning an increased national advertising program for the Dermetics line, using television high fashion, women's service, and romance magazines, and newspapers.

NORTHAM WARREN CORP. offers the retail drug trade wire self-service counter display stands and color charts at no additional cost with Cutex Spillpruf Polish and Polish Remover deals. Also offered is a self-service lipstick display card containing 13 assored Cutex Stay Fast lipsticks, at the regular wholesale price of one dozen. A $4.85 Emery Board Assortment is also being offered.

ELIZABETH ARDEN's Valentine line included a greeting card holding a sachet, at $1.50; a red velvet pin cushion heart holding a plume bottle of My Love Perfume, at $7.50 or, with a larger bottle, $13; a ruby red heart with a perfumair, $2.50; and a satiny gold-framed pin cushion heart with a plumed bottle of My Love Perfume, $3.

The Editorial -"WE"

Chlorophyll Claims To Be Studied

THE announcement of the Federal Trade Commission that it is planning trade practice conferences on the advertising of chlorophyll and the substantiating evidence of the claims mentioned in such advertising should be welcomed most enthusiastically by all companies and workers in the field. The manufacturers of products containing chlorophyll should be willing and anxious to present to the FTC any evidence that their claims are scientifically correct. If convincing evidence is not forthcoming, then there can be no argument with the contention that the the claims should be withdrawn or modified. On the other hand, the recent attacks on the chlorophyll claims, both in a number of scientific journals and at the meetings of the American Chemical Society and the Society of Cosmetic Chemists, should make it apparent that there is a body of opinion highly skeptical of the value of chlorophyll. Unless this opinion is counteracted by the governmental investigators, it is inevitable that it take wide hold in scientific and eventually public circles. What is needed at this time is impartial investigation and an open mind. Unfortunately, it seems that, on both sides of the fence, people have jumped to entirely unwarranted conclusions. On the one side, we note a letter from a chemist in a recent issue of *Chemical and Engineering News,* which poses the question: "If chlorophyll does the things that are claimed for it, where is the scientific evidence?" And then, this letter-writer goes on to conclude: "To regard this chlorophyll affair as a hoax would be naive." Now, to ask for the scientific evidence and, without awaiting it, go on record as stating that chlorophyll is a hoax, or even worse, is in our opinion also quite naive. Nevertheless, some of the statements by the proponents of chlorophyll are not less so. From our distinguished contemporary, *Drug Trade News,* we note an editorial statement: "We are sure that the big manufacturers of chlorophyll products and preparations knew full well what they were doing when they decided to pour millions into the chlorophyll business. . . . It's our belief that they had facts, and plenty of them, before embarking on the chlorophyll tour." To give *carte blanche* to a manufacturer merely because he has made a claim may be an expression of confidence in an advertiser, but is hardly the type of thinking that can lead to a separation of fact from fancy. We wholeheartedly endorse the FTC action, and look forward to that impartiality out of which truth can emerge.

Indeed This Was A Merry Christmas

IT is considered by many to be a weakness of the perfume industry and, to a slighter extent, other sectors of the cosmetic industry, that Christmas plays such a gigantic role in the yearly sales. For some companies, and for some products, the first few months of the year are only a necessary evil to be passed over while awaiting the holiday season. For such firms, we were happy to learn, 1953 was in no way a disappointment. The general opinion is that the excellent sales in the stores were reflected in all departments where gifts were sold: appliances, toys, books, bicycles—all did well. Perfumes and cosmetics were no exception. Although we wholeheartedly agree that the perfume firms have suffered from the concept that their product was exclusively a gift item, one cannot but rejoice at the excellent sales for such purpose. In fact, to the extent that perfume is given as a gift, to that extent, we contend, will the recipient be more likely to get into the fragrance habit and start to use the product each day and several times a day, eventually replenishing her supply without awaiting another package from Santa Claus.

Industrial Forecasts Continue to Be Cheerful

AS 1953 gets under way and the holiday season recedes more and more into the background, we become accustomed each day to the new governmental administration in Washington, and look for repercussions of the political change in industry. Whatever the reasons may be, whether we are sailing high on an arms and war economy or whether we are as capable of producing and distributing for peace as for war—the fact remains that both production and consumption are at new peaks in the history of the United States. Employment is at a new high; unemployment is not only lower than at any time in the last several decades in absolute numbers, but is particularly low in percentage of the total employable population. Almost without exception, the outlook of the economists is optimistic, despite forecasts of seasonal slumps and of the possibility of temporary lags because of the buildup of large inventories. Inflation continues to threaten the economic life of America, as do high taxes, the unbalanced budget, the accumulation of an ever-growing national debt. But let us place these phenomena, regrettable as they are, in their proper perspective. American industry is at this time in a strong—extremely strong—position. We are confident that there is nothing foreseeable on the horizon that can change this picture, either from a long- or a short-term viewpoint. Although individual industries and sections of industries can suffer reverses while our economy in its entirety is standing strong, we see every reason to believe that the cosmetic industry will continue to go forward and will soon reach the billion dollar goal that seemed to be a hopeless mirage only a few years back.

Beauty and the Best

A trick headline? Not in the least.

Your cosmetic products deserve the handsomest and most efficient packages—for beauty must be sold.

Research, design and manufacturing know-how make Hazel-Atlas Cosmeticware the best containers for you.

Hazel-Atlas Glass Company

Wheeling, West Virginia

To put your cosmetics

AHEAD IN 195?

plan now...with Givaudan creations!

Perfume is a major factor in building up consumer preference for your cosmetics. The more judiciously you can select your odors to meet popular trends, the greater your assurance of growing sales. Givaudan's specialized experience in compounding and creating perfumes with outstanding appeal — and tested suitability — provides you with an effective way for continued consumer acceptance.

Whatever your perfume problems, we invite you to bring them to Givaudan.

Givaudan-Delawanna Inc.

Leaders in Creative Perfumery

330 West 42nd Street • New York 36, New York

Branches: Philadelphia • Boston • Cincinnati • Detroit • Chicago • Seattle • Los Angeles • Toronto

the confidence of a star

Fine perfumes, like fine performers, require imagination, effort and experience. Whatever the audience D&O Perfume Compositions add to your fragrance product that magic final touch... demanding the spotlight with the confidence of the star. Consult D & O.

D&O ESTABLISHED 1796 REG. U. S. PAT. OFF

DODGE & OLCOTT, INC.

180 Varick Street • New York 14, N. Y.

Sales Offices in Principal Cities

ESSENTIAL OILS • AROMATIC CHEMICALS • PERFUME BASES • VANILLA • FLAVOR BASES

Inspection Rights For FDA Are Needed

THE recent decision of the United States Supreme Court in the Cardiff case, declaring that the Food and Drug Administration does not have the authority under the law to inspect manufacturers' plants and warehouses, has left that agency devoid of powers that are needed if it is to perform a useful function for public, industry, and government. Following this decision, the FDA sought the support of the food, drug, and cosmetic industries, and particularly their trade associations, for amendment of the law so that the powers of inspection might be restored. Although we are entirely sympathetic to the position taken by the Proprietary Association that mandatory inspection powers be limited so that the privacy of formulas, for example, might be maintained, the fundamental question remains one of *reasonable* inspection. Not only as a safeguard to public health, but also as a safeguard to responsible industrial manufacturers against competition from those who do not properly take measures to protect the public, we believe that mandatory inspection powers are necessary. By all means, let the law be rewritten carefully. By all means, let the manufacturers be protected. In a sense, the Cardiff case decision will prove helpful, for it now provides an opportunity to rewrite the inspection section of the law with the benefit of several years of experience. If there have been abuses, and we know that there have been, let them be called to the attention of Congress so that the new law does not repeat the errors of the old.

Congratulations Across The Sea

ONCE again there comes to our desk the British issue of *The Journal of the Society of Cosmetic Chemists,* more than 100 pages of excellent scientific material dealing with a variety of subjects of value to the cosmetic industry; foam stability, perfumes, stability of hair preparations, toilet soap manufacture, use of statistics, and others. The high level of research and presentation in these articles needs no new emphasis from anyone in this country. Congratulations are certainly due, not only to the editors, writers, and other members of the Society in Great Britain, but to their colleagues in the United States. It would be difficult to find an example of international cooperation in the publication of a scientific magazine as striking as is the case of this periodical. Almost identical in size and format, practically indistinguishable from the issues published in the United States, the British publication has even succeeded in having continuous pagination with the American. Not only for the quality of the papers, but also as an example of outstanding international scientific cooperation, *The Journal of the Society of Cosmetic Chemists* deserves the commendation of all sectors of scientific industry.

Controls Continue To Be A Knotty Problem

A TENTATIVE but evidently firm decision seems to have been reached to allow price and wage control power to expire at the stated date of March 31. At the moment of writing this editorial, there seems to be no stand-by control bill plans. It is possible that the authority of the executive to institute such controls may continue, and that certain minor and supposedly emergency measures may be taken. But all in all, the sweeping powers of government bodies over wages and prices seem to be doomed. We were quite puzzled, and in fact amused, to read the various viewpoints of industrial publications on the impending abrogation of controls. From *Advertising Age,* there comes a warning against "many business men, shouting lustily for free enterprise and that good old American spirit of competitive endeavor, (who) rush to the courts or the legislatures at the merest whisper of serious competition. To put things quite simply, they want the government to stay out of business . . . except when their own business is affected, or seems to be affected. They want a good, healthy competitive system . . . governing the things they buy, but not the things they sell." If we look at our own past impartially and introspectively (a difficult task, indeed!) then most of us would probably find a great deal in the above description to fit ourselves. We cannot, on the one hand, demand control at every point in which it is favorable to our own immediate business needs, and on the other repeat, with *Business Week,* that "the use of direct controls is inimical to the basic character of our economy."

Drug Stores and Supermarkets

THE struggle between the drug stores and the food outlets for a greater share of the consumer's dollar continues. We believe that important clarification of the nature of this competition comes from Mr. Herman C. Nolen of McKesson & Robbins, who pointed out before the Merchandising Executives Club of New York that food outlets are making progress in items that can be sold without service, but not on cosmetics, pharmaceuticals, and other items requiring service. Even within the cosmetic field, we believe, the progress will be more apparent for some products than for others. It seems hardly likely that the supermarket is going to become the store where women buy perfume and toilet water, and probably not lipstick and face powder. These are, when all is said and done, glamour products. The shampoo and the dentifrice, as Mr. Nolen correctly points out, are more likely to become supermarket items. This differentiation which he has made is a significant one, and we feel should be further studied in order to understand problems of marketing, advertising, pricing, and packaging, all of which are tied up with the nature of the outlet in which the product is to be sold.

Don't Write Off The Older Workers

IT is most fortunate for America that the full employment in this country coincides with the sharp increase of able-bodied and competent persons who have surpassed the ages of 60 and 65. At a time when this country is in need of workers, a large group of competent people in their sixties and even seventies have come forward to fill what might otherwise have been a serious gap. These are people who are experienced, who bring maturity of judgment to their jobs, and are unusually careful and have excellent safety records. These are assets of considerable importance in the assistance of younger workers. The Health Resources Advisory Committee of the Office of Defense Mobilization is urging upon industry the further employment of older workers as representing the "reaping of maturity's harvest." We can think of no cause more worthy of the serious consideration of all sectors of American industry.

WHAT THE RETAIL BUYERS REPORT

Great Potentialities for Early Spring Sales Seen; Shampoo, Salve, Rinse, Hair Pencil Volume Up

JEAN MOWAT

Chicago – The spring sales are already showing an increased demand for the finer type of shampoos, salves, and rinses, also pencils to touch up the hairline.

Much of this increased business is due to the hike in the beauty shops' price of shampoo and set that became effective last month and without previous notice to clients, amounting to 75¢ to $1. The cosmetic department felt this impact almost immediately.

Vacation Sales in Winter

Buyers see the market for the darker foundation creams right now, to meet the demand from vacationists returning from the South who want to cling to their tans. They and many wives of the furniture conventioneers, who are always here in January, like rich, deep lipsticks, yet the buyers have nothing to offer them.

June in January?

There is one story told by a buyer who had placed a larger than usual order at a Christmas promotion for a fragrance that was different. It didn't move. She was stuck and wrote much of it off at inventory. Early last April she saw these bottles, had them freshened up and placed them on the counter and used a card that indicated these were the first of the summer florals. The initial display sold out so fast at a reduced price, that the original price was placed on the remainder, and the sale was rated a huge success. She was the first on State street to have summer floral colognes in April.

The manufacturer had recalled most of the merchandise because it had been of no holiday appeal. This year he will begin featuring it next month and try and get ahead of his competitors on summer florals. Buyers agree that if more summer florals were featured early they would do more business. Any floral fragrance will outsell the heavy scents about 10 to one, if various stores' reports are indicative of trends.

Bath salts, oils, water softeners are also included among the items that will be featured for spring sale and stressed from the standpoint of relaxation and reinvigoration. The first of such advertising is now appearing in major papers and the beauty editors are taking every advantage to work in with the manufacturers.

Cooperative Advertising

In these days when all mark-ups are being made as close as possible the question is being raised in front offices whether or not the half-price, or entire cost of a cosmetic ad, is not harming the industry because this must be included in the selling price. The co-operative idea is liked, but the question has arisen now, if this is not the time for a change and let the stores run their own ads without any more assistance from the maker than mats.

At a recent executive panel this topic was discussed and the summation was this: "We believe that such co-operative advertising takes all initiative away from the store and results in no increased volume."

Skin-Appeal

Hudson's, Detroit, featured a week-long skin beauty show for sales-personnel, with three sessions a day and four on Monday. Nineteen major firms were represented, each working with the women to aid them in a better personal selection of merchandise. Seven of the firms had TV shows to make a wider appeal. "If a manufacturer would only realize the audience he has on TV," said a buyer in Detroit, "it would be worth much of his advertising dollar to go into this medium. We have had direct results and even phone calls right after the show, only proving that it was of interest and definitely worthwhile. A woman can see without being shoved around as at a counter demonstration."

The Arden type of editorial, used in the St. Louis area, stressing hands that will not indicate birthdays, has been widely discussed. Buyers like this and in the smaller cities where the large newspapers have a good circulation, such information is taken as gospel truth.

Buyers as a whole consider this an important presentation, and as it brings into them much business from the surrounding areas, they are all for it. As few of the cosmetic departments sell detergents the buyers, with whom this topic was discussed, did not realize the damage that the continued use of these were doing to hands.

January Specials

January cosmetic specials had intense sales' competition from the annual white sales, with the latter obtaining the major business. Cosmetic specials had their largest drive in such cities as Milwaukee, Detroit and Chicago.

Year opens with good lotion, cream sales; early demand for floral scents, hair goods indicate potentialities of early spring marketing and promotions.

•

Wintertime vacationists an unrealized outlet for summertime toiletries.

•

Panel resolves that cooperative advertising fails to pay off in volume.

Buffalo Doing Excellent Staple Goods Business

MAGGIE FLEMING

Buffalo—The toiletries business in Buffalo has taken a very promising turn for the better. This improvement evidenced itself not only in the final tally of Christmas buying, but in the over-all business in staple items following Christmas and during this first week of the New Year.

At J. N. Adam's it was found that average Christmas purchase, definitely exceeded the unit cost of individual purchases made the previous year at Christmas time. The top-brand, better-known merchandise was *much* more in demand than in previous years of Christmas-customer buying. Following December 25th, there was a steady, heartening increase in volume sales of regular merchandise—such as the variegated facial creams and lipsticks, and other sundry staple items. And the half-price sales which hit the counters after January 1st found a far better response than they did at this same time last year.

Promotions

A Rubinstein representative held forth with treatment consultations for a week, with excellent response—aided and abetted by an appearance on J. N. Adam's TV merchandise program. And Revlon's O'Farrell at J. N.'s enjoyed equally good success with his "no-charge" Personalysis make-up clinic.

Oppenheim & Collins reported an improvement in Christmas-buying as compared with the previous year's figures. And they are feeling very thrilled over taking on the Helena Rubinstein line, as of the first of New Year. In their January half-price items, the leaders were Dorothy Grey's dry skin mixture and hormone cream, Tussy's Wind and Weather lotion, Coty's Body Beautiful, and Revlon's Aquamarine lotion with the soap included free.

At the Wm. Hengerer Co. it was learned that Christmas shipments arrived so very, very late that it had the toiletries department in a swivet. And when customers could not secure the requested merchandise which had not yet arrived, they naturally switched to something else.

Higher-priced items started selling earlier here this year than last year at Christmas, with pick-up stocking items being the last-minute merchandise that people swarmed the counters for; a complete reverse of the previous year's Christmas buying. Single perfume and cologne items remained at the top, right through to Christmas Eve, Lucien Lelong and Faberge being the only packaged sets that sold to a marked degree. Hazel Bishop's lipstick trio seemed to have the lead in lipsticks. The January half-price sales have gone along fair-to-middlin' here, but not with the usual verve that customers have registered in other years.

The new $4,000,000, eight acre Helena Rubinstein plant at East Hills, near Roslyn, L. I., launched into full operation following its official opening on January 12. Located on a 20-acre site, it will triple production of the former Long Island City plant. It has some 1,500 employees on its rolls, representing an annual payroll of several million dollars, according to vice-president Roy V. Titus.

1953 Opens with Good Lotion, Cream Sales for New Orleans

LEE MCKENNON

New Orleans – The 1952 Christmas season was far better than 1951, buyers enthusiastically aver. Many lines were sold out and others depleted by the rush of shoppers. Perfumes were tops on the Christmas shoppers' lists and they sold better than ever before. The buyer at one large department store gave credit to the manufacturers for this. She said the small containers of perfumes marketed throughout the year at a small price paid off at Christmas time. Women were acquainted with the various scents and bought the larger, more expensive sizes, or requested them as gifts.

Kidmetics a Treat

The buyer at another large department store noted a trend which should be interesting. She said their cosmetics for children went especially well. She noted that customers were looking for child gifts aside from toys, and cosmetics were a find. Helene Pessl's sets consisting of bubble bath, toilet water with atomizer, soap and cologne sticks sold exceptionally well. Elizabeth Arden's Child's Beauty Kit also went very nicely.

Fancy packaging proved more attractive than ever this year. Coty's frills pleased the buyers and their gold slippers sold exceptionally well. Faberge's quartets, trios and duets, packaged so cunningly, sold out at one department store. At the same store Revlon's manicure sets ranging in price from $2.85 to $30.00, packaged in brocade and leather, sold quickly.

Treatments as Holiday Sellers

Some of the buyers say treatments do not sell too well during the holidays but the Frances Denney line disproved this statement at a large department store. The Invisible Beauty Strap, $17.50 perfume and the cologne as well as the creams and oils sold in a gratifying volume right through the season. The buyer thinks that many treatment lines are removed from the counters to make room for gift-packaged items which accounts in part for the drop in treatment sales.

1953 has begun with a nice sale of lotions and creams. Coty's $2.00 "Body Beautiful" on sale at the introductory price of $1.00 is selling rapidly. Revlon's Aquamarine Lotion is moving nicely. Treatments are doing very well. One buyer reports Erno Laszlo's representative was here recently operating in a somewhat different method which was quite successful. Instead of appearing at the counter, the representative consulted with patrons in private. Appointments had been made in advance with regular users of Laszlo's products, and new customers were booked for appointments. Any problems were discussed and further treatments outlined. The results were very pleasing to the customers and buyer.

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Dallas Features Heavy Skin, Hand Cream Promotions; Hair Products Continue as Best-Sellers

JEAN ROBERTS

Dallas—After a terrific Christmas season which left cosmetic department clerks practically in a state of collapse, the stores have turned to sales merchandise and to try to ward off the flu bug which has attacked the area in almost epidemic proportions. The virus has been keeping both salespeople and customers at home. Nevertheless, business is holding up well.

Practically without exception, stores report a good Christmas sales season in their cosmetic departments. Buying started late, but gained momentum rapidly. Gadgets were particularly popular during the gift season. Neiman-Marcus, for instance, advertised a tiny purse atomizer, jeweled and in the shape of a flit gun. Labeled a "flirt-gun," it sold out almost before it could be displayed on the counter.

A. Harris found customers appreciated the large bar devoted to men's cosmetic items and the experiment of a large amount of space to merchandise for the male was definitely labeled a success.

Since the New Year, cosmetics have come in for a large amount of newspaper lineage, both for special promotions and for sale merchandise. Much has been written editorially and in ad copy about skin and hand creams since this is a very dry season in Texas. A promotion on Lanolin Plus cream by a chain drug was particularly successful. The advertisement was set up like an editorial page in the newspaper. Radio spots tied in with the news copy. This store is convinced that women will read a large amount of copy on cosmetic ads providing it is well done.

Brand Loyalty vs. Hair Goods

Products for the hair continue to be good sellers. Customers in this field seem not to stick to one brand, but will try whatever one is getting the most advertising at the moment. Even in the home permanent field, buyers are not loyal to one product and are apt to try the "newest thing," even after having had success with another. The new Aquamarine shampoo which comes in four different bottles for four different types of hair has sold well. Hair dyes and rinses are not lead items in most Dallas stores since departments do not push them.

Manufacturers representatives who come into a Dallas store to demonstrate the art of make-up always produce good crowds. Clerks say these demonstrations also sell merchandise. They are, however, not sure that these same customers remember what they learn from the experts, for another trip into the store is likely to reveal that they have continued with approximately their same make-up habits. Clerks in the departments are not encouraged to make suggestions unless advice is asked even though a customer requests an item entirely "wrong" for her. Most clerks believe that the manufacturer could provide more information which would help in connection with their products both in the form of clerk training and in customer information.

Cincinnati Yule, January Sales Satisfactory; Men's Goods, Top Scents Top Sellers

MARY LINN WHITE

Cincinnati – Though cosmetics sales did not surpass the previous year's figures in the way that general retail goods did, most sellers were satisfied with the Yule business and the early January specials of weather items at reduced prices.

Men's cosmetic items were strong sellers everywhere, though for some inexplicable reason some stores reported a run on sets (Shulton's at McAlpin's for instance) while others told of success with single items (Alms and Doepke). Other Christmas merchandise which went well included the many little under-$2 items with gay packages. Hazel Bishop's trio of lipsticks at $1.25 and her jeweled lipsticks at $2 were runners, and the total tag of $6.15 (with federal and state tax, was no barrier to the many who purchased Ciro's Originals here. Most departments reported that they could have sold more of these if they had had them in time.

As always, fine scents went fast at the last. Chanel's supply was exhausted in several spots, and Guerlain and Sortilege were much wanted too. This was all name-brand merchandise. Not all of the buyers of these were men of mature years, either. More expensive gifts seem to be bought by high school and college youths each season.

But the usual range of gift prices, from under a dollar to about $6, came up on the registers repeatedly, too. At Alms and Doepke, it was by virtue of a large modern Christmas tree, where perfume bottles, compacts, pill boxes, implement sets, manicure items from 25 cents to $6 had to be reordered and replaced on the display practically every hour. This store, with a unique set-up in large-scale mail-order business, was having much of its success on the winter specials through the mails, by the way. Blizard weather kept women out of the stores, but the merchandise sold anyhow.

There is again definite evidence that local women wait for these sales (Tussy, Barbara Gould, Revlon, Coty, Rubinstein, Dorothy Gray and Arden), and one is tempted to wonder. Perhaps the year-round price might just as well be the special-price, since most of the merchandise moves at the special-price anyway.

In the jobbers' shops and barber shops, there's a strong and continuing demand for Stephan's, the hair and scalp lotion. The merchandising of this is somewhat unusual, though, as many who would like to buy the product can not find it at their usual drug counters.

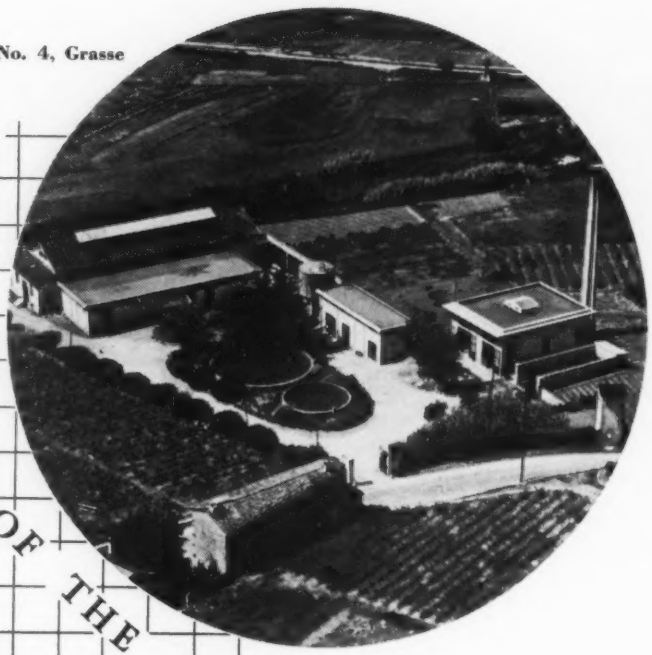
In the Crystal-Ball

Several promotions are expected to bolster early spring business. For one, Arthur Godfrey's promotion of Lanolin Plus, coming right after Mademoiselle Magazine's push of lanolin, will be a hit, if the rush on Elizabeth Arden's 8-hour cream after his one mention of it is any criterion. Shillito's and Pogue's will go along with John Robert Powers' promotion of a $7.50 value in lubricants for $5. Hazel Bishop's combination package with a free sample of the 35-cent size of liquid rouge will be good (Shillito and elsewhere). The early resentment against this line, apparently because of circus advertising and inordinately low price, seems to be fading.

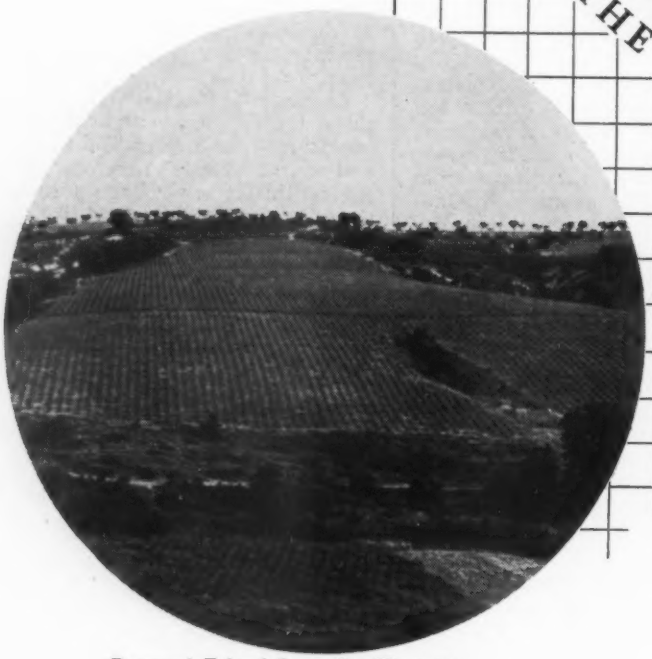
Toiletries Displays Gain in Scottish Self-Service Stores

Soap, shampoos, toiletries, shaving creams, cosmetics and allied products are being more and more prominently displayed in Scottish self-service stores, it is reported. This is said to be in direct response to resulting sales. However, line and perfumes do not follow this trend, according to the report.

Factory No. 4, Grasse



IN THE HEART OF THE FLOWER FIELDS



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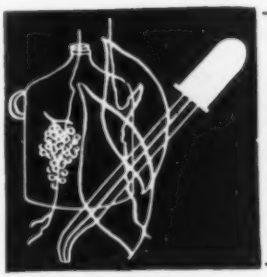


Flavors

Use of Flavoring Oleoresins

Oleoresins are useful flavoring materials and considerable interest has been displayed recently by the flavor industry in these products. . . . Practical suggestions for their use.

MORRIS B. JACOBS, PH. D.

OLEORESINS, as is well known, have long been used as flavoring materials but in recent years interest has been reawakened in them by the flavor industry as shown in their further development. This is undoubtedly due to their wide acceptance by the food industries.

Flavoring oleoresins as well as flavoring extracts have close association with the oleoresins and flavor extracts used in pharmacy and as pointed out by *The Dispensatory of the United States of America*, 1950 Edition, the class of preparations known as oleoresins was introduced into the *United States Pharmacopoeia* in the 1860 revision. Before that time oleoresins were classed, very often, with fluid extracts. A number of oleoresins originally included in the various revisions of the *United States Pharmacopoeia* have been deleted from the roster. Thus recent editions only contain Aspidium Oleoresin. Some of the oleoresins formerly described in the U. S. P. are now carried in the *National Formulary*. Thus recent editions of the N. F. contain descriptions of Capsicum Oleoresin, Cubeb Oleoresin, and Ginger Oleoresin.

Commercial Availability

Among the oleoresins commonly available on a commercial scale are those of capsicum, celery, cubeb, dill, ginger, mace, parsley, paprika, black pepper, white pepper, and vanilla. In addition to these certain firms offer oleoresins of cherry bark, chicory, coffee, gentian, haw, hickory, hops, horehound, lemon peel, lovage, orange peel, fenugreek, sassafras, and tonka. The most important of the oleoresins commercially available are probably those of capsicum, celery, ginger, pepper, and vanilla.

Definition

Oleoresins may be defined as viscous or semisolid extracts of plant materials containing the volatile oils, fixed oils, resinous materials, and occasionally other active ingredients of the plant materials from which they are prepared. They are generally prepared by extraction of the plant material with a solvent with subsequent evaporation of the extracting solvent leaving the characteristic viscous, pasty material.

Solvents

A number of solvents have been mentioned in the literature as suitable for the preparations of oleoresins. Among these may be mentioned ethers such as ethyl ether and isopropyl ether, alcohols principally ethyl alcohol, ketones principally acetone, aliphatic hydrocarbons such as pentanes and hexanes and other more complex hydrocarbon mixtures such as petroleum ether and petroleum benzine, and aromatic hydrocarbons such as benzene (benzol).

Guenther, in the first volume of his comprehensive treatise *The Essential Oils* (Van Nostrand, New York 3, N.Y.), discusses the criteria of a solvent for the extraction of materials in the preparation of oleoresins and resinoids to be employed in perfumery. These are that the solvent should be (1) powerful and selective in dissolving the desirable principles, (2) low in boiling point, (3) low in solubility of water, (4) chemically inactive, (5) uniform in boiling point and low in nonresidual matter, and (6) low in price and noninflammable. Dr. Guenther adds that a solvent having all these criteria is not available.

Such criteria are, however, not entirely the same for solvents used in the preparation of flavoring oleoresins. Thus while it is true that the fire hazard and the nonvolatile matter content of the extracting solvent are important factors in the choice of a solvent for the preparation of flavoring oleoresins, of equal importance are the toxicity of the solvent when ingested as contrasted with the toxicity of the solvent when inhaled (that is, its industrial hygiene aspects) and the compatibility of traces of solvent and of the nonresidual matter retained by the oleoresin.

According to the literature the

principal solvents used in the manufacture of flavoring oleoresins are ethyl alcohol, acetone, and ethyl ether. Those prepared with ethyl alcohol are usually considered superior products and command a higher price.

Petroleum ether, petroleum benzine, pentanes, heptanes, and especially benzene (benzol) are generally not considered.

There has been a development in recent years in the solvent extraction of perfume materials which may in the future play a significant role in the preparation of flavoring oleoresins. This development has been the use of liquefied gases such as propanes and butanes under pressure as extraction solvents. Such solvents have most of the criteria, with the exception of flammability, noted above. The use of such liquefied gas solvents presents very interesting possibilities and many engineering problems.

Preparation

The principles of the manufacture of oleoresins are simple. The plant material is extracted with a solvent, the properties of which have been discussed above, generally by repeated extractions, usually by percolation although the Soxhlet method is also employed at times, and the solvent is subsequently removed by distillation and evaporation to obtain the desired residue. This residue may then be adjusted in strength to obtain a uniform product.

Details of the preparation of spice and flavoring oleoresins have been given by Goldman in this section of THE AMERICAN PERFUMER in April, 1949 and need not be repeated here. As new developments arise from time to time, they will be noted.

It will be informative to discuss briefly the oleoresins of capsicum, ginger, pepper, and vanilla.

Capsicum

A method for the preparation of capsicum Oleoresin N. F. is described by the *National Formulary*. Capsicum in coarse powder is extracted by a percolation process with either acetone or ether as the solvent. The major portion of the solvent is recovered by distillation and the residue is transferred to a vessel from which the remainder of the solvent is permitted to evaporate spontaneously. The liquid oleoresin is decanted from the fatty material also present or else is separated from this fatty matter by filteration through coarse filters.

This process appears to be capable of extracting all of the active principles of capsicum mainly capsaicin. There is a suggestion in the literature that the process may be improved by freezing the residue from the evaporation step. The fatty material solidifies and the desirable portions of the oleoresin, which are still liquid, at temperatures at which the fatty materials solidify, may be separated by filtration in the cold or by decantation after piercing the upper solid fatty layer.

Oleoresin capsicum is available commercially in strengths conforming to N. F. specifications and requirements. The raw material may come from American sources, in which case the product is sometimes called Oleoresin Red Pepper or from raw material from foreign sources such as African chillies, in which instance, the product is given its official name.

Ginger

The volatile oil content of ginger oleoresin has been specified by the N. F. Thus "Ginger Oleoresin yields not less than 18 cc. and not more than 35 cc. of volatile ginger oil from each 100 grams of oleoresin."

The oleoresin is made by percolating ginger ground to a moderately fine powder with ethyl alcohol, acetone, or ethyl ether. The major part of the solvent is recovered by distillation and the solvent in residue after transfer to an appropriate vessel is permitted to evaporate spontaneously. The principles of ginger oleoresin have been discussed in detail in this section in previously published papers.

Grades Available

Oleoresin ginger is available in several grades. Thus various firms offer: Oleoresin Ginger N. F. (conforming to the requirement given above), Oleoresin Ginger Acetone Extraction N. F., Oleoresin Ginger N. F. Extra, Oleoresin Ginger Superlative (which has a larger proportion of volatile oil than that prescribed for the N. F. product), Oleoresin Ginger "Pale Dry" (prepared specially for use in ginger ales and having again a larger proportion of volatile oil than N. F. requirements), Oleoresin Ginger Alcoholic Extraction N. F., and Oleoresin Ginger Jamaica N. F., and Oleoresin Ginger Jamaica N. F. Alcoholic Extraction. These products have been listed in their approximate order of cost.

Alcohol extraction ginger oleoresins are generally recommended for use in beverages such as ginger ales.

Pepper

Oleoresina Piperis was official in U. S. P. IX (1916) and the make of preparation then prescribed was extraction with ether. Since then, it has been deleted from these official compendiums.

The oleoresin is prepared by extraction of ground pepper berries by percolation with acetone, alcohol, or ethyl ether as mentioned for other oleoresins, but in this instance the oleoresin is generally obtained by concentration by distillation in vacuum.

The main components of the oleoresin are piperine, chavicine, piperdine and other piperdides, the volatile oil of pepper which has the aroma but not the pungent quality of pepper, an alkaloid, and some resins.

Oleoresins prepared from both white and black pepper are commercially available.

Vanilla

In the manufacture of vanilla oleoresin, it is customary to prepare vanilla extract in the usual manner. The extract is then concentrated by evaporation of the solvent under vacuum until all of the solvent is removed.

Oleoresins of vanilla are usually standardized so that a given weight of the oleoresin diluted to a given final volume with ethyl alcohol, water, and sirup will yield a vanilla extract conforming to governmental specifications. For instance one supplier recommends to make 1 gallon of vanilla extract use 3.5 pints of water, 1.5 pints of sirup, 3 pints of ethyl alcohol, and 6 ounces by weight of the vanilla oleoresin.

In general manufacturers of vanilla oleoresin will supply the proper dilution ratios for their particular products. Oleoresins of vanilla offer the flavor distributor, flavor manufacturer, and food processor a simple and rapid means of preparing pure vanilla extract without need of expensive equipment.

1953 National Beauty Trades Show Plans Progressing

Plans for National Beauty Trades Show, to be held in the Hotel Statler, New York, August 31, September 1 and 2, are progressing, N.B.B.M.A. president Karl H. Mamlok reports. The show is being jointly conducted by the N.B.B.M.A. and the N.H.C.A.

bosentone
woody note
rich and
alluring

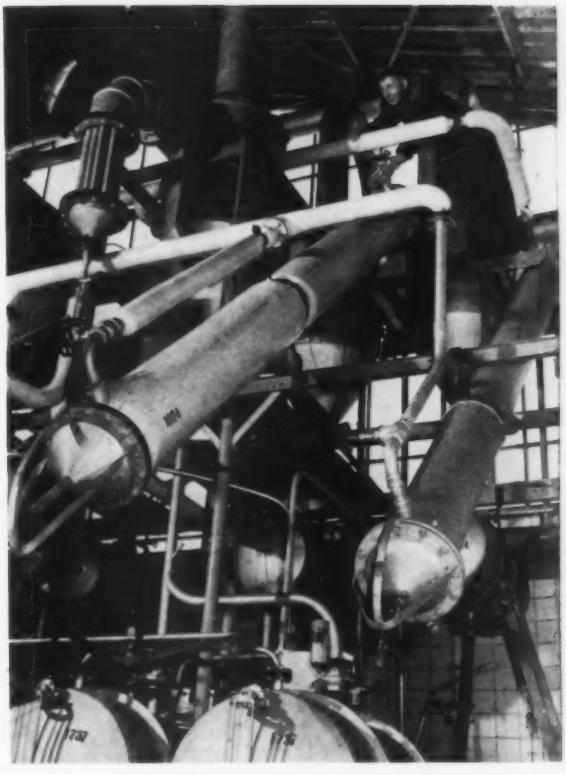
perfume is a paranymph to beauty

"naarden"
HOLLAND

An Analysis of

Flavor Aromatics

BY KURT KULKA, PH. D.*



Fruit juice flash pasteurization and cooling plant.

—N. V. Chemiesche Fabriek "Naarden"

Naturally occurring materials . . . Extracts of natural products . . . Synthetic aromatic chemicals . . . Perception

FIRST of the natural and synthetic flavor aromatics to be mentioned are the naturally occuring materials. They are derived to the largest extent from various parts of plants grown all over the world. Products which are used without processing are the Spices, Herbs and Seeds. They are used as such or in powdered form to give life and relish to many food products.

Spices: are certain parts of aromatic plants grown in the tropics. They emit that familiar pungent spicy taste sensation. To mention a few examples:

Black Pepper Berries—from the East Indies
Ginger Roots—from Africa, Asia and the West Indies
Clove Buds—From Madagascar
Cinnamon Bark—from Ceylon
Cassia Bark—from China

From aromatic plants grown mostly in the temperate zone of the globe are obtained:

Herbs: which are the leaves of these plants. Examples are laurel leaves and dried parsley leaves.

Seeds: such as caraway seeds, dill seeds, mustard, etc.

Miscellaneous: products which are derived from other plant parts. For example garlic and onions.

Most of the spices, herbs, leaves and related products did not only retain their popularity but the demand for them increased in the course of the past years.

Recently the flavor processing industries—meat packers, canners, bakers and the beverage industry—use many of these products, but particularly the spices, in form of the so-called Oleoresins.

Extracts of Natural Products

A. Oleoresins and Tinctures

Oleoresins and tinctures are the total extracts of the aromatic principles of various parts of plants such as roots, barks, leaves, etc. separated by solvent extraction from non-aromatic ballast, such as cellulose and starch.

Oleoresins result after removal of the solvent.

Tinctures are alcoholic extracts from which none or a part of the solvent (alcohol) was removed.

Oleoresins and tinctures are favorably used where resinous or other non-volatile materials are part of the flavor or taste complex. For example: oleoresins of spices, vanilla and Tonka bean extracts and oleoresins vanilla and Tonka.

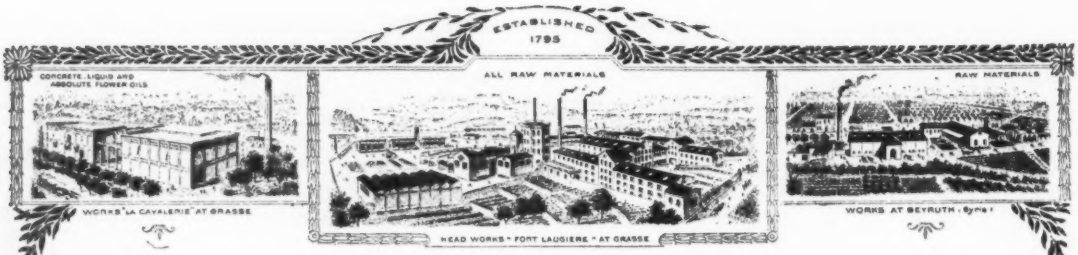
B. True Fruit Flavors

True fruit flavors are the genuine, concentrated extracts of many fruits, such as grapes, peaches, cherries and various berries, representing the aromatic principles such as essential oils, found mostly in the skin of the fruits and such naturally occuring chemicals as tartaric acid, tannic acid and citric acid, found in the fruit meat and fruit juice.

Inert materials, such as pectin, cellulose, mineral matter and water are usually removed from these extracts to a great extent.

As the result of improved and novel techniques developed by the Department of Agriculture in Philadelphia, Pa., it is possible to preserve the bouquet of the medium to a great extent.

*Research chemist, Dodge & Olcott, Inc. Lecture at New York University.



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At this point the "frozen citrus concentrates" should be mentioned. For example, concentrated orange juice which is obtained by quick evaporation of a great part of the water. Following quick freezing under exclusion of air and keeping the concentrate under refrigeration will protect such vital constituents as flavor and vitamins.

Beverages such as coffee and tea are aqueous extracts of these drugs. By controlled dehydration the water soluble matter including flavor constituents can be obtained.

C. The Essential Oils

Essential oils represent the volatile, odoriferous constitutents of plant materials and are obtained by steam distillation or in the case of citrus oils by expression from the skin of the fruit.

Many of these essential oils such as lemon, orange, grapefruit or cassia oil are used extensively in the huge soft drink industry.

From these natural sources *chemicals* can be isolated, for example:

From Oil of Peppermint: Menthol

From Oil of Wintergreen: Methyl Salicylate

From Oil of Cloves: Eugenol

From Oil of Bitter Almond: Benzaldehyde

From Oil of Anise: Anethol

From Oil of Cinnamon: Cinnamaldehyde

As the result of the great strides that chemical science and chemical industry has made, many naturally occuring chemicals are now produced synthetically from relatively inexpensive raw materials.

Benzaldehyde, cinnamaldehyde, coumarin, menthol, vanillin, methyl salicylate, various fruit esters and many others are striking examples of this chemical progress.

Synthetic Aromatic Chemicals

The synthetic aromatic chemicals, which are not present in natural products, represent a separate group comprising chemicals manufactured by the aromatic industry, such as, many esters, ketones, aldehydes and lactones, having distinctive odors resembling fruits and flowers. Examples are: Amyl cinnamaldehyde, having a jasmin odor, hydroxycitronellal, having a lily of the valley odor, or the so-called strawberry aldehyde, cocoanut and peach lactone.

Oil of Peppermint

Among this variety of flavor and perfume materials, oil of peppermint seems to be outstanding in many ways. It enjoys a wide range of application and wide consumer acceptance. This laid the foundation to the economically important American oil of peppermint industry, which produces today most of the world's supply of peppermint oil.

Botanists consider the various types of peppermint plants as not pure hybrids, but as the result of crossings between various species. Native probably to the southern region of Europe, the first organized planting of peppermint and production of the oil occurred at the beginning of the last century at Mitcham, England.

Today, there are the following types of Peppermint plants cultivated:

a) White or White Mitcham Mint.
b) American Mint.
c) Black or English Mint

and as a separate group:

Japanese Mint.

The *White Mint Plant* is grown at present only in England and there on a limited scale. The plant yields a small amount of oil, which is considered to be of the finest quality. The production of this oil is of no commercial significance, and it is used probably by a small and selected group of consumers.

The *American Peppermint Plant* resembles the black or English Mint in appearance, but in contrast its leaves and stems are of a light green color. The yield of the oil is smaller than that of the

Black or English Mint—This type of peppermint is the most resistant to diseases and insect pests and gives the highest yield of oil. The U. S. Department of Agriculture recommends it in mint-farming.

The so-called Mitcham type oils, which are cultivated in Europe, for example; Italy and France, are distilled there mostly from acclimatized Black mint plants.

The *Japanese Mint Plant* (mentha arvensis) is not of the same origin as that of European or North American peppermint plants. Japanese mint oil, which is cultivated also in Brazil, is very rich in menthol and is primarily a source for this material. De-mentholized Japanese oil has a bitter taste, and lacks the sweetness of aroma.

Plant life is influenced by various factors such as climate, soil conditions, cultivation, plant disesases and insect pests. It is understandable that the same plant grown in various parts of the world when acclimatized will differ eventually in character. This explains partly the variation in aroma and taste of peppermint oils grown in various parts of this country and those of foreign origin.

In America, the main producing centers for peppermint are in the middle west and north west.

The highest yields are obtained in the northwest where peppermint acreage gives up to 100 per cent greater yields of oil than comparable plantations in other areas. Thus the Pacific northwest became the leading oil of peppermint producing area in the United States.

A dark, rich soil, for example; from a former swamp land, irrigation and care of the fields contribute to the high quality of American peppermint oils. Particularly, the radical eradication of weeds is important to avoid off-odor and off-taste.

Among other factors influencing the quality and composition of the oil are time of harvesting and proper drying of the plants before processing.

The time of harvesting is best when the mint is in bloom. If harvested prematurely, the menthol content will be lower and menthone content higher, resulting in a bitter taste of the oil. After full bloom the oil content of the plant decreases rather rapidly.

The crude oil is obtained from the plant by steam distillation. Following this it is rectified by fractional distillation and finally a blending is made of the proper cuts so that the oil will meet the U.S.P. specifications.

In the Middle West the English or Black Mint is cultivated, whereas the peppermint grown in the state of Washington is of the American variety.

The aromas of oils obtained from the two areas are somewhat different. Generally, oils from the middle west are considered of better flavor quality than that of the northwest.

Recently "Menthofuran," a compound of unusual chemical structure, which is found in all oils of peppermint, attracted considerable attention.

Menthofuran, while by itself has a rather unpleasant odor, is necessary in a normal amount (1-3 per cent) for the fine aroma of peppermint oils. When removed (by its maleic anhydride adduct) from peppermint oils, they acquire a pungent, sharp note. However, when present in an excessive amount (5-10 per cent) the

This tall, round Duraglas toilet bottle, "A-4"19, capped with a smart lustrseal closure can help you capitalize on brand recognition at the point of purchase.

MAKE-UP makes the difference...

gives your package individuality . . . your line a family look!

With impulse buying growing, every package you send to market must have *impact* at the point of purchase.

Your product will make a hit with consumers when packaged in a distinctive Duraglas sales-package. They're economical . . . so practical in use.

There are hundreds of stock-mold Duraglas containers from which to choose one that's exactly right for your product. Then, packaging specialists at the Duraglas Center help you add glamour and sales appeal to your selection with effective designing of color, label and closure.

In today's competitive selling conditions you need to capitalize on the distinctive individuality you can give your product in a Duraglas sales-package. And remember, no matter what the market is like, it doesn't pay to let your package get out of the habit of selling every minute it is on display.

Duraglas straight-sided, tall, round toilet bottles are available in 4-oz., 6-oz., 8-oz., and 16-oz. sizes.

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physico-chemical properties of peppermint oils are unfavorably changed. This is partly due to the high dextro rotation of 92.5° of menthofuran. Peppermint oils with an abnormal high menthofuran content generally have a low menthol content $43 per cent).

Menthofuran as a terpenoid substance is suceptible to autoxidation resulting in an acidic compund. This may cause discoloration and a change in the aroma and flavor of peppermint oils.

The recent findings of French scientists that an abnormal high amount of menthofuran in peppermint oils is caused by parasitism of an Acarus are of high importance.

There are specially rectified peppermint oils on the market, which have specific characteristics—for example, a sweeter, smoother or more pungent taste. In order to assure their uniform quality, rigorous chemical, physical and organoleptic tests have to be maintained.

The trade names of some of these oils, for example "Sweetmint" or "Diamond White" express their particular property. The name appeal should go hand in hand with an eye-appeal, so therefore a "Diamond White" oil must be of the clearest, sparkling appearance and going further in this thought, for example: an orange drink must not only taste like orange but its color and appearance must be accordingly.

Many of the constituents of peppermint oil were recognized and isolated, for example:

Dimethylsulfide, pinene, cineol, l-limonene, menthofuran, menthone, pulegone, menthol, cadiene, etc.

But peppermint oil still remains as one of these important natural products, where unknown trace-substances contribute remarkably to the delicate aroma. American peppermint oils are valued as such and while rich in menthol, they are hardly used for menthol production.

Perception of Flavors

Speaking about flavor materials, a few words should be said in general about the perception of flavors.

Our sense of smelling is allied to our sense of taste. This can be realized when our smelling nerves become paralyzed due to a head cold and consequently something seems to be missing even from the tastiest food.

There are only 4 basic tastes. They are:

Sour, bitter, sweet and salty.

A scent is more rapidly observed than a taste and will stimulate the following sensation: the taste.

The variety of scents is considerably larger.

Many sensations which we generally considered as tastes are in fact due to aroma. Sometimes we realize this fact and we appreciate the aroma of coffee, tea, wine or meat equally or even more than their taste. Therefore, the quality of many flavor materials—for example oil of peppermint—will depend greatly on their aroma.

Some flavor aromatics can be actually felt on the skin. This applies to oil of peppermint or menthol, many spices and spicy tasting materials.

In contact with the mucous membranes, the cooling or burning effect of these materials is intensively felt. In moderate amounts they stimulate taste and smelling nerves and the saliva glands.

One of the main constituents of oil of peppermint is *menthol,* which is a remarkable product in many ways.

Menthol can exist in 12 isomeric forms but only l-menthol is found in American peppermint oils.

L-menthol and dl-menthol are those of commercial value. They exert the familiar, unique, refreshing and cooling effect. L-menthol and dl-menthol are sublimable, which is important because the phenomenon of sublimation enhances the fragrance of its medium.

Other sublimable substances are for example: vanillin and coumarin.

Synthetic Menthols

L-menthol is usually synthesized from citronellal which is a constituent of oil of citronella. Under acidic conditions, citronellal is converted to isopulegol which on hydrogenation gives a mixture of optically active menthols. From this mixture l-menthol is isolated. This synthetic material is a complete reproduction of the naturally occuring l-menthol having a melting point of 42-44° and a negative (laevo) rotation of 49-50° determined in alcoholic solution.

Dl-menthol is conveniently prepared by hydrogenation of thymol. From the thusly resulting mixture of optically inactive menthols, dl-menthol is isolated having a melting point of 32-34°. Being composed of equal parts of l-menthol and its mirror image i.e., d-menthol, it has an optical activity of zero.

The number of other "important" flavor aromatics is great and therefore the choice of another example difficult.

"Vanilla," which will be discussed briefly in the following pages, was chosen because it is one of the most popular and appreciated flavors in the world.

Vanilla

Vanilla is obtained from the vanilla bean which is the unripe, dried and cured vanilla fruit.

The vanilla plant is a native of Mexico. It is cultivated there and in other tropical parts of the world where a moist hot climate with a habitual dry summer spell prevails.

There are 2 main species of the plant known:

1. *Vanilla Planifolia*—comprising the Mexican and Bourbon Vanilla, and
2. *Vanilla Tahitesis*—representing the Tahiti-vanilla.

Mexican vanilla is considered of top quality followed closely by the Bourbon vanilla, which is grown in Madagascar and the Reunion Islands.

The Tahiti vanilla has a somewhat different aroma and taste, partly due to the presence of anisic alcohol and anisic aldehyde. It is the least valued among the previously mentioned vanillas.

The physical appearance of Mexican beans is large and slender, Bourbon beans are shorter and thicker. They are darker than the Mexican beans and become gradually covered with needle shaped crystals of vanillin.

The Tahiti vanilla has a broad middle part and is somewhat pulpy.

Among the other species of vanilla, the following are worth mentioning:

1. The South American or Guadeloupe vanilla, having a reddish brown color and a rather soft meat. It is considered of low quality.
2. The wild growing vanilla Planifolia, called "Vanillons." In the curing process of vanillons, heliotropine is formed and only a small amount of vanillin. "Vanillons" are used in tobacco flavoring and to scent sachets.

When vanilla is cultivated the pollination of the flowers is made by hand to insure maximum crop yield.

The unripe vanilla fruits are green and odorless. When they begin to turn yellow they are harvested and treated in a special manner, the so-called "curing." This process lasts from 2 to 8

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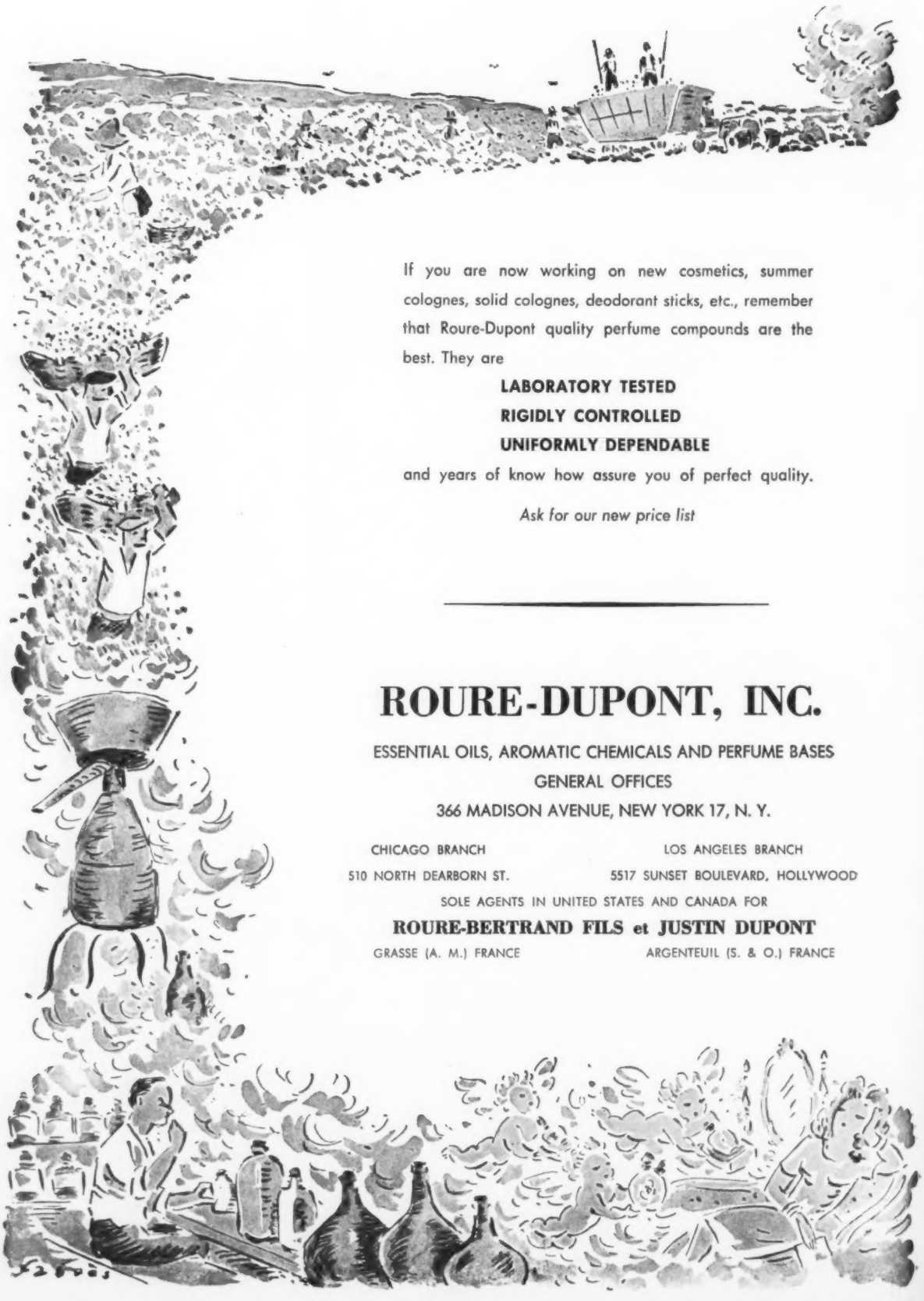

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weeks. The vanilla pods are immersed in water, drained, exposed to the hot sunshine and covered with blankets during the night. In the course of this process enzymatic reactions take place and the complex of fats, resins, tannin, essential oils, vanillin and other aromatic and nitrogen compounds are formed, which are responsible for the unique, delicate aroma of vanilla.

Vanilla extract is a dilute alcoholic tincture containing in 100 cc. the soluble matter of not less than 10 grams of vanilla beans.

The extract can be prepared by maceration with diluted alcohol of the beans. For this purpose the beans are cut into small pieces, in order to facilitate the penetration of the medium.

The strength of the alcohol is important in order to obtain exhaustive extraction of the aromatic principles, the resinous matters which contribute to the rounded-up aroma of vanilla extracts and natural color.

A 50 per cent alcohol is well suited for the extraction of the resins. A 45 per cent alcohol however will carry some undesirable gelatinous products. Generally, alcohol of 60-65 per cent strength will give an extract of the best quality.

In order to circumvent the use of taxed ethyl alcohol, sometimes other solvents are used. Such solvents are for example; straight or aqueous isopropanol, acetone, benzol, etc. After exhaustive extraction these solvents have to be removed completely and oleo resins result. They are used as such in food industries or can be re-constituted to Vanilla Extract by dissolving them in the right amount of diluted ethyl alcohol.

While vanillin is considered the main odoriferous constituent of vanilla, it is present in the extract in the relatively small amount of 0.8 to 3 per cent. The most valued genuine vanilla extract, that from the Mexican beans—has a comparable low vanillin content. For comparison, the following figures are given:

Mexican extract contains 0.15 to 0.20 g. vanillin in 100 cc.
Bourbon extract contains 0.13 to 0.22 g. vanillin in 100 cc.
Tahiti extract contains 0.11 to 0.17 g. vanillin in 100 cc.
South American extract contains 0.19 to 0.23 g. vanillin in 100 cc.

Vanilla extracts yield with neutral lead acetate a heavy precipitate. This precipitate settles in a few minutes leaving the upper layer clear and partly decolorized.

The lead number indicates the amount of lead in the precipitate and is used in the evaluation of vanilla extracts. A genuine vanilla extract of 100 cc. will have a lead number of 0.40 to 0.80.

Tonka bean extract which is sometimes used for adulteration of vanilla extracts will have a much lower lead number. While Tonka bean extracts resemble vanilla extracts in appearance, they have a sharper and more pungent scent due to the presence of its main constituent coumarin.

So-called imitation vanilla extracts contain generally:

Synthetic "Vanillin"
Synthetic "Coumarin"
Synthetic "Heliotropine"
Synthetic "Ethyl Vanillin" (Bourbonal)

and caramel color. Sometimes syrup, alcohol, or a glycol is added. There is of course the possibility of various compositions for example by combining Tonka bean extracts or vanilla extracts of low grade or even other resinous materials with these synthetics.

Among the chemicals used in vanilla imitations, vanillin, coumarin, piperonal and ethyl vanillin are highly interesting. They are used not only in the aforementioned vanilla products but in many other artificial flavor compositions and perfumes. From a scientific point of view they are milestones in the progress of chemistry.

Vanillin was first produced commercially in 1874 by Tiemann and Haarmann in Germany. In the U.S.A. it is manufactured today from eugenol—the main constituent of oil of cloves and more economically from sulfite process waste liquids.

Coumarin, which can be prepared from salicylaldehyde, acetic anhydride and sodium acetate, is an example of the important Perkin reaction, named after its inventor.

Piperonal or heliotropine, so-called to indicate its odor, is obtained by oxidation of iso safrol. This compound is derived from Safrol, which occurs naturally in various essential oils for example ocotea cymbarum.

Ethyl vanillin or bourbonal remarkably has a more intense and finer vanilla aroma than vanillin itself. Vanitrope, a trade name for propenyl guaethol has been recently advertised as a vanilla-like flavoring agent of high potency.

Oil of peppermint and menthol are used in tooth pastes and other cosmetics; they flavor candies, chocolates, chewing gums, cigarettes, cough drops, liquors and medicines.

Genuine vanilla extracts, vanillin, coumarin, heliotropine are found in ice creams, chocolates, bakery products, other food products and beverages.

They are a part of the complex of natural and synthetic flavor aromatics. We use these products in our every day needs.

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Production Conference to Feature Candy Symposium

The Pennsylvania Mfrng. Confectioners' Assn. will hold its seventh annual production conference at Lehigh University, Bethlehem, Pa., April 23-24. Hans F. Dresel, representative, Felton Chemical Co., is the chairman. Features will include a symposium on chocolate and a paper on "Sorbitol in Candy" by Sherwood T. Cross, chemist, Atlas Powder Co., Wilmington, Del.

Vending Machines Sales 18-20 Per Cent of Soft Drink Volume

Vending machines sales of soft drinks accounted for 18 to 20 per cent of the soft drink industry's record 1952 volume, estimated at $1,100,000,000, according to a recent issue of *National Bottlers' Gazette* About 600,000 bottle coin coolers and about 40,000 cup-type machines are in use, according to the publication.

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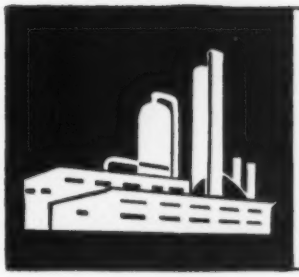
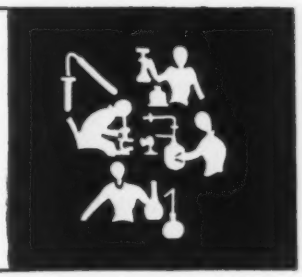


Soaps



Silicates as Soap Additives

Advantages of the silicates which are definite aids to detergency and endow soap with some important and desirable properties pointed out . . . Most useful of the soluble silicates

PAUL I. SMITH

THE old idea that silicates were used as soap fillers is now generally recognized to be entirely erroneous. These inorganic salts act as definite aids to detergency and indeed endow soap with several important and desirable properties. Bar soaps for laundry use sometimes contain as much as 35 percent sodium silicate and ordinary domestic washing soap may have about 15 percent. Washing powders sometimes hold 25-30 percent metasilicate.

From the soaper's viewpoint silicates are popular materials as they are reasonably cheap, reasonably easy to handle and readily available in bulk, moreover they are stable compounds and blend with alkalies such as caustic soda and caustic potash.

When added to soap in the crutcher the colloidal silicates, such as sodium silicate 1:3.2, 41 deg., disperse evenly and are completely taken up by the saponified fats. Metasilicate is available as a fine crystalline powder which mixes well with soap flakes and powders to form mechanical mixtures suitable for general detergency use in the home.

The practical advantages of silicates as soap additives may be conveniently set out as follows:—

1. They are cheap and yet highly effective alkalies.
2. They blend readily with caustic soda to give required ratios suitable for different kinds of soap.
3. The silicates, usually causticized, combine with soap to give a well dispersed product.
4. Silicated soaps are especially useful for laundering owing to their property of preventing re-deposition of soil.
5. Silicated soaps leave textiles, particularly printed cottons, brighter than could be obtained by use of straight soaps.
6. They possess good wetting and emulsifying properites and are, therefore, especially useful for washing extremely dirty clothes.
7. Silicates are safer to use than ordinary alkalies having a less drastic action on textile fibres and also the hands of the operatives.
8. Silicated soaps have a slight but useful sequestering action, although, they are not generally claimed to be sequestrants. This action, which consists in breaking down insoluble soaps into finely dispersed particles, effectively prevents "rings" being formed in wash tubs and other containers.

Of importance is the fact that a range of silicates are now available which renders these materials a good deal more versatile. Apart from the colloidal silicates there are the more vigorous meta and sesquisilicates which are often used as ingredients of domestic washing powders. In this connection it is as well to point out that metasesqui and orthosilicates are vigorous metal cleaners and cannot safely be recommended for cleaning soft metals, such as aluminum. For washing-up powders these silicates are not suitable ingredients.

Generally speaking the most useful of the soluble and colloidal silicates is $Na_2O.\ 3.2\ SiO_2$ which is a 41 Be'liquid. The ratio of this product is 1:3.22, its specific gravity 1.394 and its viscosity in poises 1.8. This silicate is also available in the form of hydrated powders made by spray drying the liquid to a state where it contains 17 percent water. The manufacturers of this product point out that the powder dissolves quickly in hot water and more slowly in cold water.

49-Year Soap Industry Veteran Retires

After serving 49 years in the soap industry, R. P. McBriarty, purchasing agent for the Baltimore plant of Lever Brothers Co., retired on January 31. Mr. McBriarty started his career in 1903 with the N. K. Fairbanks Co., St. Louis, Mo., later named the Gold Dust Corp.

65% of Hercules Powder Co's 1952 Earnings Goes to Taxes

Income and excess profits taxes took 65 per cent of Hercules Powder Co.'s earnings during 1952, according to the company's annual report for the year.

Wrisley Defends Association in Government Suit

AN imposing list of experts including raw material suppliers, soap and glycerine manufacturers, representatives of consumers and government officials such as Senator Paul Douglas and Carlos P. Romulo, Philippine's Ambassador to the United States combined to

George A. Wrisley

make the business sessions of the three day convention of the Assn. of American Soap & Glycerine Producers in the Waldorf Astoria hotel, New York, January 27, 28 and 29 of practical value to the members and guests who came from all sections of the country.

Papers read at the Fatty Acid Division, the Glycerine Division, and the Specialty Soap Division supplemented a program of economic and scientific interest presented at the general sessions.

Essential Oil Outlook

Among the papers of especial interest was the address of A. L. van Ameringen on the Outlook for Essential Oils. Briefly some of the highlights were that the present low price of Java citronella oil is no longer a profitable one and may be expected to go up. A further rise in lemongrass oil is also expected. A firmer trend may also be expected in Spanish rosemary, patchouli, and bois de rose oils. Lavender and lavandin may weaken somewhat.

As a result of the violent price changes, and more or less uncertain supply of essential oils, soap makers, during the last 20 years, have gradually increased the use of aromatic chemicals in their perfume formulations, and they are today a very important part in such formulas.

The price of those aromatic chemicals where an essential oil serves as the starting point, as is the case with geraniol, hydroxycitronellal, citronellol, the ionones and linalool, is, of course, directly governed by the corresponding price of the essential oil from which the aromatic chemical is derived, and it would be wise for your industry to take advantage of the present price situation of citronella oil and lemongrass oil to contract for geraniol, citronellol and the ionones based on the present low prices.

The price picture of aromatic chemicals produced by synthesis has been the opposite of the picture presented by essential oil prices and aromatic chemicals derived from essential oils.

Any new development in the chemical industry makes new intermediates and primary chemicals available for the synthesis of aromatic chemicals, and makes the production of well-known aromatic chemicals cheaper, with a resulting lower selling price.

A typical example is found in phenyl ethyl alcohol where the old sodium reduction process was replaced by a Friedel-Crafts reaction due to the fact that ethylene oxide became available at a reasonable price. This change in process resulted in a price reduction from $4.50 per lb. to the present price of approximately $1.40.

The development of such new processes, and the perfection of old processes has more than offset the gradually increased labor wages, the ever mounting prices of new equipment, and rising overhead.

The research laboratories of aromatic chemical manufacturers are continuously not only developing new processes for old products, but also finding new aromatics which prove to be of great interest to the soap perfumer, and he can look forward to a continued flow of such new chemical bodies.

Comment on Government Suit

In his address President George A. Wrisley said in part:

"Everyone is familiar with the activities of the Department of Justice and the discharge without presentments of the grand jury in Newark, N.J. which had been investigating the soap industry for about 18 months. This gave many a satisfaction which was short-lived because within a few weeks a civil suit was entered in the United States Federal District Court at Newark, N.J. This pattern of a grand jury investigation followed by a civil suit is becoming a more or less standard Department of Justice procedure. The civil suit names our Association as a defendant. It is claimed that the Association aided and abetted three companies to get and keep a major share of the market at the expense of other and smaller companies. In my close relationship as a director, continuously for almost 20 years, and in my capacity as president at this time, I am able to state that I firmly believe that the statements in the complaints referring to the Association are unfounded and unfair. It does not make sense to me that my company and any other companies would pay dues to an organization which in its operation was harmful to our individual companies. Many other members have expressed similar view points. As to the outcome of this suit, time only can tell, but I feel entitled to say that we face the future outcome of this suit with confidence and faith in our Association and its program."

A. L. van Ameringen

New Officers Elected

The following officers were elected for the ensuing year:

President, George A. Wrisley

Vice President, East, E. H. Little

Vice President, Midwest, E. W. Wilson

Vice President, Farwest, Albert Haas

Treasurer, Nils Dahl

Ass't Treasurer, M. A. McManus

Secretary, Roy Peet

Directors: J. J. Babb, C. S. Campbell, Richard Carmel, N. S. Dahl, M. Fuld, Albert Haas, A. B. Hersberger, E. H. Little, Niel McElroy, E. A. Moss, E. B. Osborn, A. W. Schubert, C. L. Weirich, E W. Wilson and George A. Wrisley.

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293—AMBERGRIS-COLOGNE OIL NOVILLE

For our American girl who wants a fashionable fragrance; refreshing and lasting to her, a subtle and pleasing perfume to her company.

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294—ANIMALINE W

A crystalline aromatic of the musk type with the valuable animal note of genuine Tonkin musk and no unpleasant by-odor. Used to give life and warmth to perfume compounds and to perfume and fix soaps.

$22.50 per lb.
Samples at $1.55 per oz.
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295—BEESWAX DERIVATIVES

A series of non-ionic emulsifiers making possible O/W beeswax-type cold creams containing no soap, so that pH of product can be adjusted to match skin, or as desired. Also useful in lotions, hairdressings, etc. Information and samples on request.

ATLAS POWDER COMPANY
Industrial Chemicals Dept., Wilmington 99, Del.

Technical Abstracts

Agar Oil from Wood of Aquilaria Agallocha. Sadgopal and B. S. Varma (Forest Research Inst., Dehra Dun, India). *Soap, Perfumery and Cosmetics 25*, 169-74 (1952). The method of distg. this essential oil is detailed. The yield and constants are tabulated. Agar oil has a typical balsamic odor imposed on a woody background. It has a high fixative value and an exotic character. Morris B. Jacobs. *C.A. 46*, 10, 4731.

Dentifrice. Julian R. Schlaeger. U. S. 2,588,992, Mar. 11, 1952. A dental paste consists of $Ca_3(PO)_2$ 26.67, glycerol 45.4, water 15.4, peppermint flavoring 0.58, gum tragacanth 0.96, saccharin 0.1, Naccanol LAL 2.89, $(NH_4)_2$-HPO_4 5, urea 100-mesh 3%. Joachim Anschel. *C.A. 46*, 10, 4751.

Cosmetic for Skin Care. Penicillin-Gesellschaft Dauelsberg and Co. (Wilhelm Greuer, inventor) Ger. 812, 341, Aug. 27, 1951 (Cl. 30h,2_{02}). A process of prepg. a cosmetic for skin care comprises stirring oak-bark ext. (I) with a protective celloid, such as methylcellulose (II), introducing the mixt. into warm liquid gelatin soln., stirring, and allowing the mixt. to cool to produce a jelly. To increase the suppleness and hygroscopicity of the jelly, a softening agent, such as glycerol, and NaCl may be admixed. A suitable compn. is prepd. by boiling 1000 g. I for 0.5 hr. with 3.1 water, removing the supernatant liquid layer (III) by decantation, mixing III 300, glycerol 150, NaCl 5, II 5, and gelatin 40 g. with 500 g. water, heating the mixt., stirring, and filling it in tubes. A product effective against eczema and fungus infection is thus obtained. G. S. *C.A. 46*, 19, 9268.

Fatty Alcohols. L. Schon (Cyclo Chemicals, Ltd., London). *Soap, Perfumery and Cosmetics 25* 65-70 (1952). The phys. characteristics, methods of production, and utilization of the C_8-C_{18} fatty alcs., particularly lauryl, cetyl, stearyl and oleyl alcs. are discussed. M. B. J. *C.A., 46*, 10, 4818.

296—BOTANOL NOVILLE

Fragrant as a bouquet of roses, lilies of the valley and cyclamen. A versatile base for perfumers, gives life and dewy freshness to a composition. With or without blending BOTANOL is delightful scent for creams and lotions.

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Chypre Perfume Oil Concentrate

This new concentrate embodies all the warmth and sweetness of the popular Chypre fragrance. It may be used with excellent results in a wide range of cosmetic items. Why not order a trial quantity!

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300—FLORANTHUS

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✶ FEBRUARY Sampler

301—FORSYTHIA-VERLEY

New interpretation of this fresh harbinger of Spring. Delightful to use as a base on which to develop a new blend or can be used, as is, for cologne, creams, lipstick and other cosmetics.

$16.00 per lb.

ALBERT VERLEY & CO., INC.
Chicago, Ill.—New York, N.Y.

302—HYDROXAL

An indispensable product in Muguet and Lilac perfumes—flowery—exotic—Ask for free sample and find out what it does.

$4.80 per pound

NEW YORK AROMATICS CORP.
Highbridge, New Jersey

303—JANINE

New Toiletries Fragrance

A new perfume oil concentrate whose rich, warm fragrance, high quality and long-lasting properties make it an outstanding value in popular-priced perfumes, colognes and cosmetics. A trial quantity will convince you!

2 oz. sample—$1.50 1 lb.—$9.50

AROMATIC PRODUCTS, INCORPORATED
15 East 30th Street, New York 16, N.Y.

304—LANOLIN DERIVATIVES

Oil-soluble and water-soluble emulsifiers combining desirable lanolin characteristics with ease of use in creams and hairdressings. Information and samples on request.

ATLAS POWDER COMPANY
Industrial Chemicals Dept., Wilmington 99, Del.

305—MICROGEL WELLINE 999

covers with 2% to 5% the disagreeable odor of cold wave liquid.

Trial pound—$5.00 (postpaid)

SLUYS ROCKFORD INCORPORATED
Rockford, Mich.

Thiocarbonic Acid Esters in Hair-Wave Preparations. Menotti Del Zoppo (½ to Alice Parker). U. S. 2,600, 624, June 17, 1952. The compds. used as keratin-softening agents are: $SC(SCH_2CO_2H)_2$, yellow crystals, m. 178-4°, $SC(SCH_2CO\ H)(OCH_2CO_2H)$, white crystals, m, 136°, $SC(SCH_2CO_2Na)(NEt_2)$, odorless crystals, prepd. from $SC(NEt_2)SNH_2$ and $ClCH_2CO_2Na$, and $SC(OEt)(SCH_2CO_2H)$, odorless crystals, m. 53-4°. These are mixed in aq. soln. with alkly or aryl amines, such as $HOCH_2CH_2NH_2H_2NCH(CH_2CH_2OH)CH_2NH_2$, mixed isopropanolamines, morpholine, LiOH, 1NaOH, KOH, or Na_2CO_3, to a pH of 8-10. Surface-active agents can be added to the solns. S. W. G. *C.A. 46*, 19, 9268.

Extracting Aromatic Oils from Vanilla Beans. Lucien Romagnan (to Andree Romagnan, nee Sauvigne). U. S. 2,601, 635, June 24, 1952. Aromatic oils and essential oils, particularly the aromatic oils from vanilla beans, are released from crushed, powd., or ground material by subjecting them to supersonic radiations of 19,000 to 690,000 vibrations per sec. in the presence of an inert gaseous, liquid, or pasty medium. Vanilla beans in chip form, yielded a water dispersion contg. 150 parts by wt. of vanilla ext. in 1000 parts by wt. of H_2O when subjected to 19,000 vibrations per sec. from a supersonic emting app. developing a power of 20 w. The preferred medium is liquid which should be just sufficient to submerge the carrier. J. W. McCutcheon. *C.A., 46*, 19, 9266.

Aromatic Hydrocarbons from Dry-Distilled Plant Oils. Ryuichi Fushimi. Japan. 3120 ('50). Sept 30. Pine-root oil, camphor oil, etc., are heated at 400-700°, the oil vapor is passed through the layer of activated aluminosilicate, the fraction b. 250° is collected, recycled through the catalyst layer, and the condensed oil is washed with 20% or less of 60-98% H_2SO_4, washed with water, distd. with 30% or less of metal powder, and washed with alkali and water. K. Kitsuta. *C.A., 46*, 19, 9266.

306—MUGUET ISOTROPE #25 $28.50 LB.

A fine outstanding specialty, based on one of our own unique chemical bodies, that faithfully simulates the illusive fragrance of the Forest Lily of France.

1 oz. sample—$2.00

FLEUROMA, INC.
38 West 21st St., New York 10, N.Y.

307—OPOPONAX SRD:

An excellent base for Oriental Bouquet which will be used successfully in many compositions.

1 lb.—$8.00

ROURE-DUPONT, INC.
366 Madison Ave., New York 17, N.Y.

308—"PHANTOLID" * ®

A revolutionary new aromatic chemical possessing the fine characteristics and warm animal note of Tonkin-Musc. Stable in the presence of Acid and Alkaline media. Will not discolor cosmetics and soaps.

Price $10.00 lb.

POLAK'S FRUTAL WORKS, INC.
MIDDLETOWN, N.Y.
*Domestic & Foreign Patents Applied For.

309—RESEDALIA

An Acetal; as true a base for Reseda Mignonette types as is Phenyl Ethyl Alcohol for Rose. Combined with the Ionones, it produces very interesting and different effects.

1 oz. sample—$1.25

VERONA CHEMICAL COMPANY
26 Verona Ave., Newark 4, N.J.

310—SHARETTE

1—French Jasmin Amber Type
2—Extremely pleasant—long lasting
3—Enhances all cosmetic formulae
4—A sample will convince you of the outstanding merit.

2 oz. Sample—$1.50
1 lb.—$10.00

PERRY BROS., INC.
220 Flushing Ave., Brooklyn 5, N. Y.

✶ FEBRUARY Sampler

311—SNOW WHITE S. 900

imparts to household soap, industrial soap and detergents, that fresh and classic fragrance which housewives identify with good soap.

Trial gallon—$14.00 (postpaid)

SLUYS ROCKFORD INCORPORATED
Rockford, Mich.

312—SORBITOL

Cuts down moisture loss from creams, lotions, toothpastes, etc. A superior emollient and binder. SORBO 70% aqueous solution of high-purity sorbitol available immediately. No shortages. No fluctuating prices. Information and samples on request.

17¢ lb. in drum quantities f.o.b. plant

ATLAS POWDER COMPANY
Industrial Chemicals Dept., Wilmington 99, Del.

313—VETIVERT SYNTHETIC D&O

This recently developed synthetic finds excellent employment in all cosmetic perfumes . . . and is particularly valuable in fine toilet soaps. The true character of Vetivert, warm, rich and lasting, is reproduced with strength and authenticity in this new D&O synthetic.

$12.50 per lb. 1 oz. sample—$1.00

DODGE & OLCOTT, INC.
180 Varick St., New York 14, N.Y.

Spectrophotometric Study of Materials Used to Protect the Skin Against Sunrays. C. Piffault, P. Blanquet, and J. Higue. *Ind. Parfum.* 7, 3-9 (1952). Suntan prepns. should absorb completely radiation between 2900 and 3200 A. and transmit radiation between 3500 and 3650 A. Com. prepns. give insufficient protection. A. G. Blake. *C.A., 46,* 19, 9253.

Orange Flowers, Neroli and Absolute Oils. F. Chatelain. *Perfumery and Essent. Oil Record 42,* 405-7(1951). Seven formulas are given for artificial neroli oils prepd. from fractions of sapond. and unsapond. Paraguay petitgrain oils. H. M. Burlage. *C.A. 46,* 10, 4739.

Limits in the Possibilities of The Karl Fischer Reagent for Determining Water. Walter Ciusa and Ercole Moroni (Univ. Bari, Italy). Mikrochemie ver. Mikrochim. Acta 36/37 273-5 (1951). Good results are obtained when the moisture content does not exceed 10 mg. and when the substance is sol. in the MeOH-pyridine or can be extd. with MeOH. Particular pains are necessary to prevent contamination with the moisture in the air. The procedure is not suitable for series detns. Chem. Abs. *45,* No. 12,5343 (1951).

314—VIOLETTE PARMOL

A beautiful Violet with unusual qualities most suitable for blending in finest of Perfumery.

$40.00 per lb.

ALBERT VERLEY & CO., INC.
Chicago, Ill.—New York, N.Y.

315—WATER-SOLUBLE PRESERVATIVE

Methyl Chemosept® Sodium is the only water soluble preservative of the Para-Hydroxybenzoate type. Goes into solution readily, protects emulsions and creams more effectively.

1 lb.—$2.60

CHEMO PURO MFG. CORP.
32-25 Queens Blvd. Long Island City, N. Y.

SAMPLER FAN WRITES

I heartily approve of this "Sampler" idea of yours. I hope that you will continue the feature.

F. C. Quintana
Chief Chemist
Caligrapo Inc.

AMERICAN PERFUMER 48 West 38th Street, New York 18, N. Y.

1. FEBRUARY SAMPLER

INFORMATION REQUEST FORM

Please have further information and literature sent on items as circled below.

291	296	301	306	311
292	297	302	307	312
293	298	303	308	313
294	299	304	309	314
295	300	305	310	315

2. FEBRUARY SAMPLER

ORDER FORM

Please have samples with invoices to cover sent on items checked below.

291	296	301	306	311
292	297	302	307	312
293	298	303	308	313
294	299	304	309	314
295	300	305	310	315

NAME .....

FIRM NAME .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

Waldo Reis New President of Essential Oil Assn.

Waldo Reis, vice president, van Ameringen-Haebler, was elected president of the Essential Oil Assn.

Waldo Reis

of the U.S.A. at the annual meeting January 9.

Other officers elected were: Louis Grampert, Felton Chemical Co., vice president; Pierre J. Coutin, Roure-Dupont Inc., secretary-treasurer; and Ray C. Schlotterer, managing director. George H. McGlynn, retiring president and R. Engel, were made members of the executive committee.

In his address, George H. McGlynn, Magnus, Mabee & Reynard Inc., said in part:

"We have concluded twelve months of history making events in our industry. Without any thought of adding fuel to the fire of the remorseful recollections, for I dare say we have all been more or less discouraged by reason of the terrific inventory declines, I will say for myself that I believe we have not experienced in a quarter of a century such a turn-about as has confronted us in the last year. Decline followed decline. Terrific over-supply of many items in our line, the greed and the thirst of some overseas suppliers for the American dollar, irrespective of reasonable values, caused many distresses. Some thought that there was no limit to the quantity of oils that could be placed here, as evidenced by the tremendous overproduction of the Formosan and Guatemalan citronella oil, East and West Indian lemongrass oil, and others. There is a remedy to a situation of this kind, and I take the opportunity in the closing hours of my administration to urge that consideration be given to the matter of dumping in this market with disastrous results.

"The year 1952 seemed to some to be one of selling, unloading, and getting out from under with absolutely no thought of profit.

President George McGlynn addresses Essential Oil Assn. annual meeting.

Cosmetic Credit Men Have Gala Winter Party

As usual the friendly gathering of the members of the Drug, Cosmetic & Chemical Credit Men's Assn. at their annual Winter party in the Hotel Martinique, New York on the evening of January 29 proved to be an unusually successful affair.

Prior to the banquet a reception was held marked by the usual informal gayety. Following this the annual banquet was held. Music was furnished by an excellent orchestra and a skilled operator of the accordion. A feature of the entertainment was the singing of Arthur Mathews and also of Frank Breiter.

At the conclusion of the banquet Chairman Allan J. MacNiven presented on behalf of the group a handsome traveling bag to retiring chairman Edward S. Larkin in appreciation for his excellent services.

The complete success of the affair was due to the work of W. E. Foster, chairman of the Entertainment Committee and the popular group secretary Nat Otte assisted by William Otte.

Left: Retiring chairman Edward S. Larkin receives the group gift from chairman Allan J. MacNiven. Right: The official family: standing—Allan J. MacNiven, Mrs. MacNiven, Mrs. Breiter, Frank Breiter; seated—Edward S. Larkin, Miss Clare I. Gincel, Mrs. Larkin and Nat Otte.

NEWS and EVENTS

1953 T.G.A. Convention Committee Announced

The 1953 T.G.A. convention committee has been announced. Members are: chairman, Lamson M. Scovill, Scovill Mfg. Co.; Paul Alexander, Drug & Cosmetics Magazine; John Duncan, Hazel-Atlas Glass Co.; M. Lemmermeyer, Aromatic Products, Inc.; R. H. Miller, White Metal Mfg. Co.; E. J. Moore, Richford Corp.; Waldo Reese, van Ameringen-Haebler, Inc.; and Lee Simmons, Imco Container Corp.

California Cosmetic Assn. Installs Officers for '53

The California Cosmetic Assn. installed its officers for 1953 at a dinner held in the Mayfair Room Beverly Wishire, Beverly Hills. They are: president, A. L. Lewis, Studio Cosmetics; first vice-president, J. A. Taylor, Nethercutt Labs.; second vice-president, H. R. Schmidlapp, Shor Lab.; secretary, Lyman Borkman, Colonial Dames, Inc.; treasurer, M. W. Taylor, Avon Products, Inc.; and trustees J. M. Brinkerhoff, Studio Girl-Hollywood, Inc.; Lucile Bullock, Physicians Formula Cosmetics, Inc.; Alan Coghlan, Nethercutt Labs.; J. E. Danley, Merle Norman Cosmetics; Davis Factor, Max Factor & Co.; Carl Mitchell, "42" Products, Ltd.; Anatole Robbins, Anatole Robbins, Anatole Robbins, Inc.; Gene Salee, Gene Salee, Inc.; A. F. Commagere, R. G. F. Byington & Co. (associate members' chairman); and Ruth Blakeley, McNerney Chemical Corp. (associate members' secretary-treasurer). Gail B. Selig is counsel.

Albert Dillinger Re-elected President of Perfumers' Society

Albert J. Dillinger, van Ameringen-Haebler, Inc., was re-elected president of the American Society

Albert Dillinger

of Perfumers at the January meeting. Other officers elected were: Roy J. Huttleston, Naugatuck Aromatics, vice president; William H. Barlow, Orbis Products Corp., secretary; and Reuben Houk, Shulton, Inc., treasurer.

Everett B. Kilmer, Lever Bros., was elected a new director.

Elected to membership at this meeting were Paul H. Lelong, Warner-Hudnut, Inc.; Dr. Oliver L. Marton, Shulton, Inc.; Maurice A. Meunier, Les Parfums de Dana, Inc.; Thomas Miserendino, Ph. Chaleyer, Inc.; Pierre L. Rougny, Houbigant, Inc.; Edward J. Shuster, vanAmeringen-Haebler, Inc.; Francis H. Sloan, Roubechez, Inc., and Miss Franya H. Zibrosky, Orbis Products Corporation.

Proprietary Assn. Head Favors FDA Plant Inspection Curbs

Limitation of FDA mandatory factory inspection powers, as provided in recently introduced Senate bill S. 601, by Sen. H. H. Humphrey of Minn., was recommended by Frederick J. Cullen of The Proprietary Assn.

New Bills to Propose Cosmetic Pre-Testing

Bills requiring certification for safety of new chemicals before they are used in cosmetics, similar to recommendations of the previous legislature's Delaney committee, will be submitted during the new session, Rep. James J. Delaney of New York has indicated.

House Bill Would Abolish 20% Excise Tax on Cosmetics

A bill which would abolish the 20 per cent excise tax on cosmetics has been introduced in the House by Rep. Kenneth B. Keating, who called cosmetics necessities.

Left: Mr. and Mrs. Charles Schneider, Mr. and Mrs. Gustav Wohlfort and Mr. and Mrs. Peter Kenney. Right: Mr. and Mrs. Alfred O. Brookes and Mr. and Mrs. Owen D. Clayton.

"... and I keep dreaming about building a little factory in New Jersey!"

A dream come true . . .

On February 1st we moved into our own building at

1312 Fifth Street, North Bergen, New Jersey.

Here our office, laboratory and plant are conveniently located, with the Lincoln and Holland Tunnels two miles from our doorstep and the New Jersey Turnpike less than a mile away.

Here, too, we find fresh air, quiet and space—the ideal environment for the making of fine perfume oils.

Noville

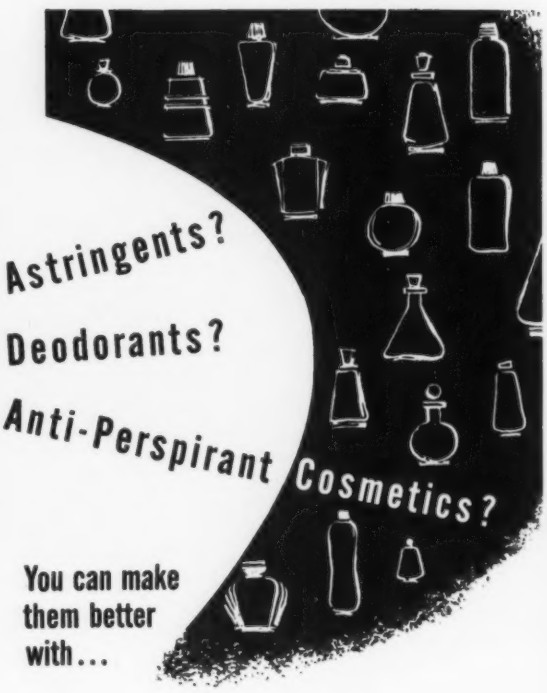
ESSENTIAL OIL COMPANY

1312 Fifth Street

North Bergen, N. J.

Telephone: Union 7-9080

Cartoon reproduced by courtesy of
Public Service and Gas Company, New Jersey.



CHLORHYDROL*

Chlorhydrol* (Aluminum Chlorhydroxide Complex) is Reheis' answer to the search for a really effective astringent and anti-perspirant. Maintains necessary astringent qualities without possessing the corrosive qualities of normal aluminum salts. Both the skin irritation normally found in aluminum chloride preparations, and the fabric destruction associated with aluminum chloride, aluminum sulphate, and other aluminum salts are eliminated in Chlorhydrol* compounds. And it's only mildly acid—needs no buffering.

Send for our free descriptive booklet today.

FINE REHEIS CHEMICALS

*Registered Trade Mark

REHEIS COMPANY, INC.

Manufacturers of Fine Chemicals

BERKELEY HEIGHTS · NEW JERSEY

N.B.B.M.A. Offers Trademark Expiration Warning Service

The N.B.B.M.A. has started a new service for its members, whereby they will be notified when they have to file affidavits of use of their trademarks registered or republished under the Act of 1946. The free service will be performed for all members who furnish the N.B.B.M.A. office with the names and dates of such registration or republication. Failure to file affidavits of use within the time required by the act results in cancellation of the trademarks.

Michigan Group Hears Soil Discussion

"Soil Structure—Key to Productivity" was the topic discussed by Gordon J. Staub, formerly of Monsanto Chemical Co.'s merchandising division, at the Movie-Nite of the Chemical and Allied Industries Assn. of Mich. held in the Detroit Leland Hotel on January 26.

BIMS of Boston Opens 1953 Season With Golf Club Party

BIMS of Boston will open the 1953 season with a winter party at the Weston, Mass., Golf Club on February 19, it has been announced by chairman Hart Harris Jr. of S. B. Penick & Co. The annual dinner will be the feature, with bowling, card-playing and other indoor sports on the program.

G&W Labs., Inc. Renovating Newly Acquired Plant

G&W Labs., Inc. has begun the renovation of its recently acquired building at 1-35 Ocean Ave., Jersey City, N.J., which will house its executive offices and entire production facilities.

Germaine Monteil Co. to Function Independently

Germaine Monteil Parfums Co. has been reorganized as an independently functioning operation, completely separated from Germaine Monteil Cosmetiques Corp. William T. Carlson has been appointed sales manager of Germaine Monteil Parfums Co.

North American Dye Corp. in New Quarters

The North American Dye Corp,. producers of Sunset Dyetint and Barrington Hand Cream, moved to Barnum Court and North St., Danbury, Conn. on January 31.

Chicago Perfumery, Soap, and Extract Assn. 1953 Officers

The Chicago Perfumery, Soap and Extract Assn. installed the following officers, elected for 1953 at a recent business meeting, on January 13 at a luncheon at the Conrad Hilton Hotel: J. C. Browning, president; W. D. Ackley, vice-president; E. F. La Sarre, treasurer; and A. H. Culver, secretary.

Jean Pierre Millon, sales manager of Coty, was honored at a luncheon given by president Philip Cortney at the Biarritz on January 7 in celebration of 20 years with the company. Those present were Coty executives. Shown from left to right are: Edward Monosson, Mary Crosby, Ray Sanders, F. M. Gallais, John Solomon, Mr. Millon, Mr. Cortney, Jean Despres, K. S. Cory, Frederick Breen, Norbert Hahn, F. R. Tourtois, Grace Hayes, Henry Esser, and Don Clement.

L. Tracy Sheffield (seated), Sheffield Tube Corp. president, approves the latest in his company's color advertising series during his recent Los Angeles series. Looking on are his son, Thomas C. Sheffield (center, standing), head of the West Coast office, Kirke Beard (left) and George A. McConnell (right) of Anderson-McConnell Advertising Agency, the firm in charge of the advertising program.

L. Tracy Sheffield Returns from West Coast Visit

L. Tracy Sheffield, president of Sheffield Tube Corp., New London, Conn., has returned from a visit to his West Coast office and customers. Sales volume of the West Coast office was the largest in history, Mr. Sheffield reported, with the 1952 figure approximately 10 times greater than the 1945 total.

While there, he approved the latest in his company's color advertising series. The series, in which Sheffield Tube Corp. has featured full color advertisements in trade publications for the past two years, spotlights products that have been packaged in collapsible metal tubes manufactured by the concern.

French Representative Attends Felton Chemical Co. Conference

Felton Co., France, with a factory and warehouse in Versailles, Department Seine et Oise, is being

Leon Gefen

represented by Leon Gefen at the annual meetings now being held at the Felton Chemical Co., Inc., headquarters in Brooklyn, N.Y.

Monsieur Gefen has been a longtime resident of Grasse and now maintains homes there and in Paris where he directs the activities of the European Felton organization. He also acts as general purchasing agent of continental essential oils and natural aromatic products for the Felton Chemical Company, Inc. in Brooklyn, N.Y. and its other manufacturing branches in Los Angeles, Calif. and Montreal, Canada.

November, December Top Toiletry, Drug Months

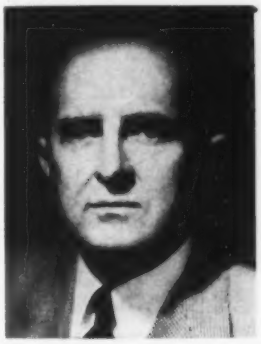
November and December are the peak months for toilet and drug goods sales by department stores, according to the Federal Reserve Board, N.B.B.M.A. reports. During the four year period, 1948-1951, sales in those months accounted for approximately 29 per cent of their annual sale. Eliminating the Christmas selling season, May and June were the next best months. Disregarding the short month February, department store sales of these articles fell lowest in April, July and August during the period.

Statistics Indicate Lower Toiletries Price Trend

Price of toilet goods, including face powder, tooth paste and hard-milled toilet soap decreased slightly during the June to September period as compared to March through June, 1952, Bureau of Labor Statistics' Consumers Price Index shows, the N.B.B.M.A. reports. Over the same period, prices of home permanent wave refills increased 3 per cent, professional permanent waves decreased .6 per cent, and haircuts increased about 1 per cent, according to the report. Percentages refer to the prices of the 1935-1939 period, which are adopted as 100.

Wm. L. Sims II President of International Colgate Agency

William L. Sims II has been elected president of Colgate-Palmolive International, a newly-formed



Wm. L. Sims II

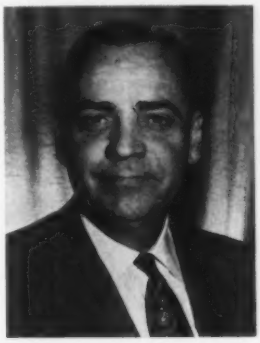
corporation to aid in coordinating Colgate's foreign operations. Mr. Sims has also been elected to the executive committee of Colgate-Palmolive-Peet Co. and will continue as executive vice-president in charge of its foreign business.

R. A. Hart, J. C. Rebaza, M. B. Morton, W. B. B. Fergusson, E. A. Spicka, G. A Glossop and H F. Blum have been elected vice-presidents of Colgate-Palmolive International.

Foreign sales of more than $122,000,000 were reported by Colgate for 1951. Sales for 1952 have not yet been announced.

Chas. P. Walker van Ameringen-Haebler Vice-President

Charles P. Walker has been appointed vice-president of van Ameringen-Haebler, Inc. Continued



Charles P. Walker

expansion of the activities of the corporation has made it necessary to add another top executive to its staff.

Mr. Walker, who had resigned as general sales manager of Chas. Pfizer & Co. on January 1, 1953, will assume his new responsibilities on February 16. He will continue, however, his present tenure as a director of Pfizer.

Mr. Walker is a member of the Drug Club; American Chemical Salesmen's Assn., and a member of the board of directors of the New York Board of Trade.

Fallek Products Co. to Represent Dehydag Line in U.S.

Fallek Products Co., Inc., New York, has been appointed exclusive distributors for the cream and shampoo bases, lanettes and emulsifiers manufactured by Dehydag, Deutsche Hydrierwerke A. G., Dusseldorf, Western Germany, one of the oldest producers of fatty alcohols.

The Chicago chapter of the S. C. C. installed the above officers for 1953 at a recent meeting. They are, from left to right, treasurer Dr. H. F. Davidson (Jules Montenier, Inc.); chairman Douglas Atlas (Marcelle Cosmetics); secretary Robert Appenzeller (G. Bar and Co.) and chairman-elect William Colburn (Colburn Labs.).

Primrose House Introduces Hartnell Fragrance Line

The Hartnell fragrance line, which will be distributed exclusively by Primrose House in the United States, was presented by buyers and beauty editors at a cocktail party in the Terrace Room of the Plaza Hotel, New York, on February 5. Guest of honor was Norman Hartnell of London, dressmaker to the royal family and creator of the line.

Mr. and Mrs. S. H. Corkran Honored at E N. Rowell Dinner

Mr. and Mrs. Sewell H. Corkran were guests of honor at a dinner given recently at the Hotel Pierre by Mrs. E. N. Rowell, president of the E. N. Rowell Co., Batavia, N.Y. Preceding the dinner a cocktail party was given at the Hotel Barclay by Mr. and Mrs. Ross A. White.

Mr. Corkran retired on December 31 after 22 years as New York representative of the Rowell Co., and was presented with a gift by Mrs. Rowell on behalf of the Rowell organization. He is being succeeded in the New York territory by Ross A. White, who had been associated with him and the Rowell Co. for many years. Mr. White will continue at the same location, 50 East 42nd St., New York 17, N.Y., and will have associated with him Walter E. Klaas, who had previously been in charge of the New York office of Brass Goods Manufacturing Co.

Views Role of Radioactive Tracers in Cosmetics

"Applications of Radioactive Tracers to Cosmetic Problems" was the subject of a discussion by W. A. McCarthy of Tracerlab, Inc., before the February meeting of the Chicago chapter of the S.C.C. in Henrici's Restaurant, Merchandise Mart, on February 10. Mr. McCarthy, a field engineer engaged in medical and industrial research projects involving radioactive materials, illustrated his lecture by several demonstrations.

At the January 13 meeting, the topic "Shampoos—Soaps versus Synthetics" was viewed by William E. Lieb, chief chemist, cosmetic division of Allen B. Wrisley Co., who spoke on "Soap Shampoos" and Alfred A. Michaud, Chicago representative of the American Alcolac Corp., who spoke on "Shampoos Based on Synthetics."

Above are the Chicago Perfumery, Soap and Extract Assn. officers for 1953. They are, from left to right: W. D. Ackley (van Ameringen-Haebler, Inc.); J. C. Browning (Demert & Dougherty, Inc.); E. F. La Sarre (St. Clair Specialty Mfg. Co.); and A. H. Culver (Packing Materials Corp.).

S. M. Rumbough, Jr. Assistant to Secretary of Commerce

With his appointment naming him Assistant to the Secretary of Commerce in the new administration, Stanley M. Rumbough, Jr. has resigned as president of Metal Container Corp. and secretary and director of sales of White Metal Mfg. Co. He is the son of Col. Stanley M. Rumbough, president of the White Metal Mfg. Co. and former president of the Collapsible Tube Mfrs. Assn.

Stanley M. Rumbough, Jr.

H. Robert Miller

H. Robert Miller, formerly assistant director of White Metal Mfg. Co., has been appointed director of sales, and Charles Stiassni, plant manager has been elected secretary.

Noville Essential Oil Co. Moves To Its Own Building

The Noville Essential Oil Co. of which A. G. Nickstadt and Alfred H. Moeller are the principals, has moved its offices and laboratory to a building of its own at 1312 Fifth St., North Bergen, N.J. Since its inception the company has been located in New York City but increasing demand for more manufacturing space necessitated its removal to the new location which is most accessible to the metropolitan area.

S.C.C. of Great Britain Holds Annual Dinner

The Society of Cosmetic Chemists of Great Britain held its annual dinner and social evening at St. Ermin's Hotel, Westminster, London, on January 22.

Agent for Alginates Appointed by Protan

Croda, Inc., has been appointed sales agents for A. S. Protan, Drammen, Norway for the sale of alginates in the United States.

Among Our Friends

MAURICE COLA, perfumer, chemist and technical consultant for Floramatic, Inc., has returned

Maurice Cola

to New York after a nine months' trip through Latin America during which time he made an extensive tour of each country and visited the firm's clients as special representative. He plans to return to France within a few months to work there with Roure-Bertrand Fils & Justin Dupont of Grasse in the study of new developments and techniques for the manufacture of essential perfume oils and cosmetic formulae.

HERBERT F. STORFER has been appointed director of sales for Parfums Corday, Inc., it was an-

Herbert F. Storfer

nounced at the recent national sales meeting held in New York. Those who attended the 1953 meeting were; Gerald Shepherd, southeastern territory; Charles Burt, Pacific Coast; William L. Bobb, mid-western territory; Jack Carter, north-western territory; Charles Clements, southwestern territory; J. D. London and Charles DeFlandre, New York and New England states; Sidney Dale and Rudolph Storfer, middle Atlantic states.

MR. AND MRS. LEON A. DE CHIRIS, of Grasse and Paris, France, arrived on the *Liberte* January 30 for a short visit in the United States. Accompanying them on the *Liberte* were Mr. and Mrs. F. E. Shoninger who had been in London for several weeks. Mr. Chiris, the head of Antoine Chiris, Grasse and Paris, France, will spend some time here on a combined business and vacation trip with Mr. Shoninger who heads up Antoine Chiris Ltd., London as well as Antoine Chiris Co., Inc., New York.

FRANK N. CARPENTER has been named vice-president in charge of sales for Shulton, Inc. He will make an extensive tour of the country and will conduct sales

Frank N. Carpenter

meetings at branch offices in Dallas, Chicago and Los Angeles.

COLEMAN McCAMPBELL, director of promotion for *The American Perfumer*, is author of "Texas Seaport: The Story of the Growth of Corpus Christi and the Coastal Bend Area," which was published December 8. The book dramatizes the history of 22 South Texas counties and gives important marketing data for each county and major cities and communities, including treatment of the Lower Rio Grande Valley as a four-county market unit.

MARVIN COLE, assistant perfumer with George Lueders & Co., celebrated his 25th anniversary with the firm on January 22, thus becoming the 53rd member of its Veterans Organization. A luncheon at the Drug and Chemical Club was held in his honor.

Mme. JEANNE NOEL of Laboratoire Noel, Grasse, France, has sailed for Italy, following a prolonged stay in the United States where she visited numerous friends in the trade. In Italy Mme. Noel will visit Dr. and Mrs. Bianchi in Bologna and then return to Grasse, France to study several ideas with

Mme. Jeanne Noel

Dr. Rojdeswensky for the American market. The perfume Texas Bonnet Bleu which she created in honor of the lone star state and which was introduced at the Dallas exhibition in 1949 has been widely accepted there.

Obituary

Walter A. Conklin

Walter A. Conklin, who has been associated with the cosmetic industry for over a quarter of a century, died at his home in Yonkers February 5. For the past year he had been in ill health. He is survived by his widow Florence Littlejohn Conklin. Mr. Conklin was twice president of the Foragers and in recent years was associated with Helfrich Laboratories, Evans Chemietics, Alexandre de Markoff and the Wallace Paper Box Co. Mr. Conklin was one of the best known men in the industry and counted his friends in the hundreds from coast to coast.

William C. Leonhard

William C. Leonhard, 63, president of the Theodor Leonhard Wax Co., Inc., Haledon, N.J., for the past sixteen years, died at his home, Delavue Manor, Yardley, Pa., of a heart attack on January 7. He was also president of the Paterson Parchment Paper Co., Bristol, Pa. He was actively associated with both companies during his entire career. Mr. Leonhard leaves a widow, Helen Edwards Leonhard, and a son, John Edwards Leonhard, both of Yardley, Pa., and a daughter, Mrs. Philip Brooks of Durham, N.C.

Market Report

Orange Oil, Thymol Prices Cut

WHILE fewer price movements were noted in essential oils and aromatic chemicals over the past month, such fluctuations were rather wide. Exchange brand Californian expressed orange oil was slashed 75 cents a pound to $1 while the distilled oil was cut 10 cents to 70 per pound. Another rather drastic price development was the reduction of 20 cents a pound in thymol. Earlier in the period under review refined glycerine prices were boosted 5 cents a pound.

Thymol Cut

Thymol, widely used in toiletry preparations, was lowered in price because of competitive conditions. The reduction established the 25 to 50 pound lot price at $3.10 and $3.15 for smaller than 25 pound quantities.

Powdered camphor turned rather sensitive on reports to the effect that fresh arrivals from Formosa were selling at well below the quotations prevailing on synthetic material. Fairly large quantities of natural powdered camphor are reported afloat and nearby against orders placed some weeks ago and it is understood that the favorable prices prevailing on this material have resulted in additional bookings.

Essential Oils Steady

Aside from the rather severe break in orange oil, most price changes in essential oils were confined within narrow limits. There was a tone of optimism in the air especially in the light of the downward price trend in the market over the past year. Many oils, it is pointed out, are selling close to the lowest price levels in more than a year. Consumer inventories which had been built up late in 1951 and early 1952 have been fairly well depleted and consequently dealers, importers, and producers are looking forward to a good volume of business in the months ahead.

Prices on a few articles are still regarded as high, but it is believed that further adjustments and a return to more normal buying habits will tend to correct these conditions.

Citric acid production is being slowly increased to take care of expanding sales. December volume was reported at a record high level, and as the period arrives when consumers normally anticipate their spring and summer requirements the demand is likely to grow more pressing.

Tallow and greases were irregular with the better grades of tallow and choice white grease losing some ground and the lower grades displaying a slightly greater degree of stability. Prices for red oil and stearic acid were reduced ½ cent a pound.

Imports Seen Easing Glycerine Supply

Although the overall statistical position in glycerine continues firm, some trade observers are looking forward to some easing in the situation in view of the many shipments of foreign material arriving here. The shipments are coming from virtually all parts of the world including Ireland, Australia, Egypt, and several other countries.

Data released here over the past month showed that domestic glycerine production dropped to 15,900,000 pounds in November from 18,300,000 pounds in October. Stocks at the end of November were placed at 37,964,000 pounds in contrast to 39,190,000 pounds at the end of October.

During World War II, or prior to the time when domestic manufacture of synthetic glycerine was started, real concern was expressed when glycerine stocks fell below 50,000,000 pounds because of the fact that glycerine is a strategic material. The vast increase in its consumption in recent years can therefore be seen in the face of the low stocks of 37,964,000 pounds, large quantities of synthetic material coming on the market, and the increased flow into the market from various parts of the world. The late advance in refined glycerine prices enabled buyers to take advantage of the quantities available in the world market. Prior to that domestic buyers were unable to meet the prices quoted in the world market which were somewhat above the quotations prevailing here.

Vanilla Bean Strong

The vanilla bean market was strong and advancing. Offerings of Bourbon beans from Marseilles or Madagascar were restricted to one or two ton lots at prices which would not permit local houses to sell goods at less than $4.50 per pound even for the lowest quality. Prime beans were commanding premium prices since replacements were virtually unobtainable at primary markets. Reports from Mexico stated that because of the excellent quality of the new crop, only a small portion of it will appear in the market in the form of cut beans. The new crop in Mexico is placed at between 250,000 to 275,000 pounds in contrast to 300,000 pounds produced last year. The demand for vanilla beans has been quite active compared to last year. The hardening price trend is believed to have spurred extract manufacturers to anticipate requirements.

Demand for lanolin continued to run well ahead of the supply. With production dependent upon wool scouring operations there appears to be little hope for any material improvement in the supply picture. Scouring operations are running somewhat above last year but with the possibility of synthetic fibers cutting deeper into the wool trade, lanolin production is likely to prove insufficient to meet total requirements of the consumer trade.

Vegetable waxes, especially beeswax and carnuba were featured by considerable strength, and in sharp contrast to the conditions that existed in the last quarter of last year, the gum rosin market presented a decidedly better tone.

PRICES IN THE NEW YORK MARKET

(Quotations on these pages are those made by local dealers, but are subject to revision without notice)

ESSENTIAL OILS

All prices per lb. unless otherwise specified.

Almond Bit, FPA per lb.	2.85@	4.25
Sweet True	.55@	.90
Apricot Kernel	.38@	.60
Amyris	1.75@	2.00
Angelica Root	90.00@	115.00
Angelica Seed	50.00@	75.00
Anise, U.S.P.	2.35@	2.50
Avocado	1.00@	Nom'l.
Bay	1.55@	2.10
Bergamot	11.75@	13.75
Artificial	3.00@	4.25
Birchtar, crude	2.00@	2.25
Birchtar, rectified	3.00@	3.40
Bois de Rose	3.45@	3.80
Cajeput U.S.P.	2.75@	3.00
Cajeput (technical)	2.00@	2.35
Calamus	11.25@	18.00
Camphor "White"	.28@	.50
Cananga, native	10.75@	11.00
Rectified	11.00@	12.50
Caraway	3.15@	3.50
Cardamon	45.00@	58.00
Cascarilla	35.00@	40.00
Cassia, rectified, U.S.P.	5.00@	5.85
Cedar leaf U.S.P.	2.30@	3.00
Cedar Wood	.50@	.75
Celery	16.50@	20.00
Chamomile Hungarian	255.00@	300.00
Cinnamon—		
Bark	24.50@	45.00
Leaf	2.10@	3.10
Citronella. Ceylon	.55@	.90
Java	1.10@	1.35
Java type	.45@	.80
Cloves, from buds	9.50@	10.00
Leaf	3.00@	3.85
Copaiba	2.00@	2.35
Coriander	20.00@	28.50
Croton	4.50@	5.25
Cumin	4.60@	6.00
Dill—		
Weed	4.25@	4.60
Seed, Indian	3.00@	3.90
Erigeron	6.50@	7.00
Eucalyptus—		
80-85%	1.05@	1.35
70-75%	.85@	1.30
Fennel, Sweet	2.40@	3.00
Garlic (oz.)	8.00@	8.75
Grapefruit	2.80@	3.15
Geranium, Rose, Algerian	12.50@	20.00
Bourbon	12.50@	16.50
Turkish	7.75@	8.60
Ginger	14.35@	15.00
Guaiac (Wood)	1.65@	2.00
Hemlock	2.15@	2.75
Juniper Berry	2.55@	2.75
Laurel leaf	9.75@	12.60
Lavandin	2.50@	3.10
Lavender, French 40-42%	6.25@	7.75
Spike	1.50@	2.25
Lemon, Calif.	5.75@	6.00
Italian	5.90@	9.75
Lemongrass	1.00@	1.35
Limes, distilled	6.25@	7.40
Expressed	7.75@	9.50
Linaloe wood	3.25@	4.00
Lovage (oz.)	10.00@	12.00
Mace	3.00@	4.15
Marjoram	3.10@	3.60
Neroli—		
Haitian	100.00@	120.00
French	220.00@	250.00
Nutmeg, East Indies	3.35@	4.00
Ocotea Cymbarum	.55@	1.00
Olibanum	5.60@	7.85
Opopanax	45.00@	48.00
Orange, Florida	.65@	1.00
Brazilian	1.50	Nom'l
Calif., exp.	1.00@	
Distilled	.70@	
Origanum	2.15@	2.85
Orris Root, concrete (oz.)	6.50@	8.75
Concrete, extra	10.50@	15.00
Patchouli	7.00@	10.00
Pennyroyal, European	2.00@	2.50
Peppermint natural	5.65@	6.15
Redistilled	6.00@	7.00
Petitgrain	2.55@	3.10
Pimento, Berry	4.50@	5.75
Leaf	2.45@	2.80
Pinus Sylvestris	2.50@	3.00
Pumilio	3.15@	4.00
Rose, Bulgaria (oz.)	58.00@	72.50
Synthetic, lb.	30.00@	35.00
Rosemary, Spanish	.65@	1.00
Sage—		
Spanish	.90@	1.35
Dalmation	7.15@	8.40
Sandalwood, N. F.	10.25@	11.50
Sassafras—		
Artificial	.55@	.75
Snake root	31.00@	35.00
Spearmint	8.00@	8.50
Spruce	2.25@	2.75
Sweet birch Southern	2.10@	3.00

Northern	4.95@	8.00
Tansy	8.35@	9.00
Thyme, red	2.00@	2.85
White	2.35@	3.50
Valerian, extra	75.00@	88.00
Vetivert—		
Bourbon	21.00@	25.00
Haitian	18.00@	25.75
Java	32.00@	37.50
Wintergreen, Southern	3.90@	15.75
Northern	6.85@	14.00
Wormseed	8.80@	9.40
Wormwood	5.75@	6.85
Ylang Ylang, Bourbon	20.00@	32.50
Haitian	12.85@	Nom'l.

TERPENELESS OILS

Bay	3.00@	3.60
Bergamot	17.60@	20.00
Grapefruit	75.00@	90.00
Lavender	10.00@	14.25
Lemon	53.70@	60.00
Lime, ex.	80.00@	90.00
Distilled	60.00@	62.00
Orange sweet	110.00@	135.00
Peppermint	13.50@	15.75
Petitgrain	5.25@	6.10
Spearmint	12.00@	13.85

DERIVATIVES AND CHEMICALS

Acetaldehyde 50%	2.15@	2.50
Acetophenone	1.40@	1.80
Alcohol C 8	1.95@	2.25
C 9	12.50@	13.00
C 10	2.00@	2.30
C 11	18.60@	20.00
C 12	2.40@	2.75
Aldehyde C 8	9.00@	11.00
C 9	16.75@	17.10
C 10	7.30@	7.75
C 11	18.60@	20.00
C 12	15.00@	15.75
C 14 (Peach so-called)	6.85@	7.50
C 16 (Strawberry so-called)	5.85@	6.20
Amyl Acetate	.55@	.70
Amyl Butyrate	1.00@	1.25
Amylcinnamic Aldehyde	2.05@	2.40
Amyl Formate	1.00@	1.25
Amyl Phenylacetate	3.75@	4.10
Amyl Propionate	1.25@	1.60
Amyl Salicylate	.90@	1.00
Amyl Valerinate	1.95@	2.40
Anethol	1.35@	2.00
Anisic Aldehyde	2.65@	2.95
Anisyl Acetate	6.00@	6.75
Benzyl Acetate	.75@	.85
Benzyl Alcohol	.78@	.85
Benzyl Benzoate	.85@	1.00
Benzyl Butyrate	1.75@	2.00
Benzyl Cinnamate	3.30@	3.60
Benzyl Formate	2.00@	2.30
Benzophenone	1.75@	2.00
Benzyl-isoeugenol	9.00@	10.25
Benzyl Propionate	1.60@	2.20
Benzyl Salicylate	1.90@	2.10
Benzylidene Acetone	2.00@	2.75
Bromstyrol	5.75@	6.35
Butyl Acetate, normal	.14¾@	.15½
Cinnamic Alcohol	2.75@	3.50
Cinnamic Aldehyde	1.25@	1.40
Cinnamyl Acetate	3.75@	4.50
Citral, C. P.	3.20@	3.75
Citronellol	1.85@	2.40
Citronellyl Acetate	2.55@	3.00
Citronellyl Butyrate	4.35@	5.00
Coumarin	2.75@	3.25
Cuminic Aldehyde	4.50@	5.00
Cyclonol	2.85@	3.15
Diethylphthalate	.45@	.51
Dimethyl Anthranilate	5.75@	6.00
Diphenyl Methane	1.15@	1.30
Diphenyl Oxide	.60@	.75
Ethyl Acetate	.30@	.35
Ethyl Benzoate	.85@	.90
Ethyl Butyrate	.85@	.95
Ethyl Capronate	2.00@	2.63
Ethyl Cinnamate	2.50@	2.80
Ethyl Formate	.70@	.80
Ethyl phenylacetate	1.20@	1.35
Ethyl Propionate	.90@	1.00
Ethyl Salicylate	1.00@	1.50
Ethyl Vanillin	6.75@	7.30
Eucalyptol	1.50@	1.85
Eugenol	2.50@	3.30
Geranoil, dom.	1.15@	2.00
Geranyl Acetate	1.55@	2.10
Geranyl Butyrate	4.00@	4.85
Geranyl Formate	4.50@	4.95
Geranyl valerianate	6.00@	6.75
Guaiac Wood Acetate	4.65@	5.00
Heliotropin, dom.	3.60@	4.00
Hydrotropic Aldehyde	5.90@	6.35
Hydroxycitronellal	6.25@	6.90
Indol, C. P.	19.00@	19.50
Iso-borneol	1.65@	1.80
Iso-butyl Acetate	.85@	1.50
Iso-butyl Benzoate	1.10@	1.50
Iso-butyl Salicylate	2.15@	3.00
Iso-eugenol	4.10@	4.85
Iso-safrol	2.10@	2.80
Linalool	5.85@	6.40
Linalyl, Acetate 90%	6.00@	6.50
65-70%	4.85@	5.25
Linanlyl Formate	11.90@	12.85
Linalyl Propionate	11.00@	11.55
Menthol—		
Brazilian	5.05@	5.20
Japanese	6.90@	7.15
Synthetic	4.95@	5.20
Methyl Anthranilate	2.40@	2.65
Methyl Anthranilate extra	2.75@	3.10
Methyl Benzoate	.55@	1.25
Methyl Cinnamate	1.75@	2.25
Methyl Heptenone	5.55@	6.20
Methyl Heptine Carbonate	35.00@	40.00
Methyl Naphthyl Ketone	3.30@	3.65
Methyl Phenylacetate	1.10@	1.75
Methyl Salicylate	.50@	.65
Musk Ambrette	5.40@	5.65
Ketone	5.35@	5.60
Xylene	1.55@	1.80
Neroline (ethyl ether)	2.50@	2.80
Paracresyl Acetate	2.20@	2.75
Paracresyl Methyl Ether	2.10@	2.75
Paracresyl Phenyl-acetate	4.60@	5.20
Phenylacetaldehyde 50%	2.75@	3.25
100%	4.10@	4.65
Phenylacetic Acid	1.65@	2.25
Phenylethyl Acetate	1.70@	2.00
Phenylethyl Alcohol	1.75@	2.00
Phenylethyl Butyrate	4.20@	4.50
Phenylethyl Propionate	3.40@	4.00
Phenylethyl Salicylate	4.35@	4.80
Phenylethyl Valerianate	5.80@	6.10
Phenylpropyl Acetate	3.40@	4.20
Phenylpropyl Alcohol	2.70@	3.20
Safrol	.80@	1.25
Scatol (oz.)	2.65@	3.40
Styrolyl Acetate	1.75@	2.50
Thymol, crystals	3.10@	3.25
Vanillin (clove oil)	6.75@	7.25
(guaiacol)	3.00@	3.25
Lignin	3.00@	3.25
Vetiver Acetate	47.50@	50.00
Violet Ketone Alpha	9.90@	10.25
Yara Yara (Methyl ether)	2.35@	2.80

BEANS

Vanilla beans—		
Bourbon	4.50@	5.25
Mexican, cut	4.35@	4.50
Mexican, whole	4.50@	4.85
Tahati	3.60@	Nom'l.
Tonka Beans Surinam	1.10@	1.35
Angostura	1.75@	1.80

SUNDRIES AND DRUGS

Acetone	.10¼@	.14
Ambergris, ounce	8.00@	17.50
Balsam, Copaiba	.90@	1.25
Canada fir, gal.	31.50@	33.00
Peru	1.40@	2.00
Beeswax, bleached, pure U. S. P.	.70@	.75
Yellow, refined	.60@	.65
Bismuth, subnitrate	2.65@	
Borax, crystals, carlot ton	61.25@	81.25
Boric Acid, U. S. P., ton	129.00@	133.50
Calcium, Phosphate	.07¾@	.08¼
Phosphate, tri-basic	.07½@	.07¾
Camphor, pwd., domestic	.57@	.59
Castoreum, nat., cans	7.25@	10.00
Cetyl, Alcohol, extra	1.32@	1.37
Chalk, precip. bags, clts	.02⅞@	.03
Cherry Laurel Water, jug, gal.	1.25@	Nom'l.
Citric Acid	.28½@	.29½
Civet, ounce	5.50@	7.80
Cocoa butter	.79@	.80
Cyclohexanol (Hexalin)	.34½@	.35
Dextrine, white, cwt.	8.72@	8.87
Fuller's Earth, Mines ton	27.00@	30.00
Glycerin, C. P.	.44½@	.44¾
Soap lye, crude	.31@	.32
Gum Arabic, white pwd.	.40@	.45
Amber	.13½@	.14½
Gum Benzoin, Siam	3.50@	3.85
Sumatra	.38@	.45
Gum Galbanum	.80@	.95
Gum karaya, pwd.	.20@	.35
Gum Myrrh	.30@	.37
Henna, pwd.	.23@	.29
Kaolin	.05@	.07
Labdanum	3.70@	4.50
Lanolin, hydrous	.36@	.39
Anhydrous	.36@	.38
Magnesium, carbonate	.11¼@	.14
Stearate	.38@	.42
Musk, ounce	50.00@	65.00
Olibanum, tears	.20@	.25
Siftings	.16@	.18
Orange Flower Water, gal.	1.75@	2.25
Orris Root, Italian	.20@	.26
Paraffin	.06⅜@	.07⅛
Peroxide (hydrogen U. S. P.) bbls.	.03¾@	.05
Petrolatum, white	.06⅜@	.08⅝
Quince Seed	1.25@	1.50
Rice Starch	.15@	.18
Rose flowers, pale	.60@	.65
Rose Water, jug (gal.)	1.25@	1.85
Rosin, M. per cwt.	8.80@	8.90
Salicylic Acid	.46@	.52
Saponin No. 1	2.75@	2.80
Silicate, 40° drums, works, 100 pounds	1.10@	1.40
Sodium Carb. 58% light, 100 pounds	1.60@	4.62
Hydroxide, 76% solid, 100 pounds	3.35@	4.55
Spermaceti	.34@	.37
Styrax Asiatic	.85@	1.00
Tartaric Acid (250 lb. drums)	.37@	.41
Tragacanth, No. 1	2.90@	3.20
Triethanolamine	.26¼@	.27¼
Violet Flowers	1.85@	Nom'l.
Zinc stearate, U.S.P.	.37@	.39
Oxide, U.S.P.	17½@	.18½

OILS AND FATS

Castor, refined, drums	.28½@	.29
Coconut, crude, Atlantic ports, tanks	.16⅞@	.17¼
Refined, drums	.23½@	.24
Corn, crude, Midwest, mill, tanks	13¾@	.14
Corn Oil, refined, tanks	.17¼@	.17¾
Cottonseed, crude tanks	.14@	.14½
Grease, white	.05⅛@	.05½
Lard, Chicago	.09½@	.10
Lard, Oil, common, No. 1 drums	.11@	.12
Olive, edible (gal.)	2.30@	2.40
Peanut, crude tanks	.23@	.23½
Peanut, refined tanks	.27@	.27½
Red Oil, single distilled drums	.13@	.14½
Double distilled	.15½@	.16¼
Stearic Acid Triple Pressed	.13¾@	.14½
Double Pressed	.11½@	.12¾
Tallow, acidless, drums	.09¾@	.10¼
Tallow, extra	.04¾@	.05⅛

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FLAVOR CHEMIST—SALESMAN WITH MANY YEARS OF PROVEN EXPERIENCE IN CREATION, PRODUCTION, COMPOUND AND SUCCESSFUL SALE OF TRUE AND IMITATION *FLAVORS LOOKING FOR EXECUTIVE POSITION.* HAS KNOWLEDGE OF APPLICATION OF FLAVORING MATERIALS AND POSSESSES PERSONAL ACQUAINTANCE IN THE FOOD AND BEVERAGE INDUSTRY. Box 2978, American Perfumer, 48 W. 38th Street, New York 18, N. Y.

Graduate Chemist. Extensive experience in formulating flavors, perfumes and cosmetic preparations. Well versed in organic synthesis with an extended record of commercially successful items. Practical engineering background in production methods. Position in Metropolitan New York area is desired. Box 2976, American Perfumer, 48 W. 38th St., New York 18, N. Y.

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CHEMIST. Recent graduate, male or female, to assist in research and development laboratory of major manufacturer perfumes and toiletries. Box 2977, American Perfumer, 48 W. 38th Street, New York 18, N. Y.

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Used 6 disc Ertel Filter Machine. Filter 100 gals. per hour. Two copper 75 gal. tanks. Box 2981, American Perfumer, 48 W. 38th St., New York 18, N. Y.

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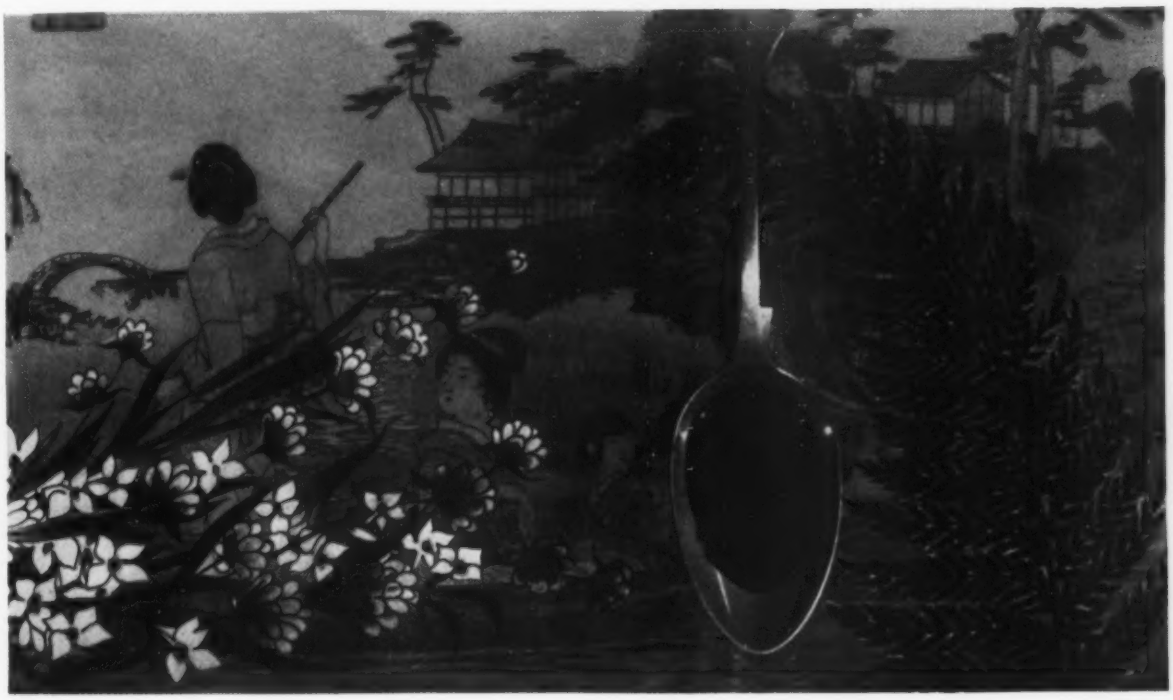

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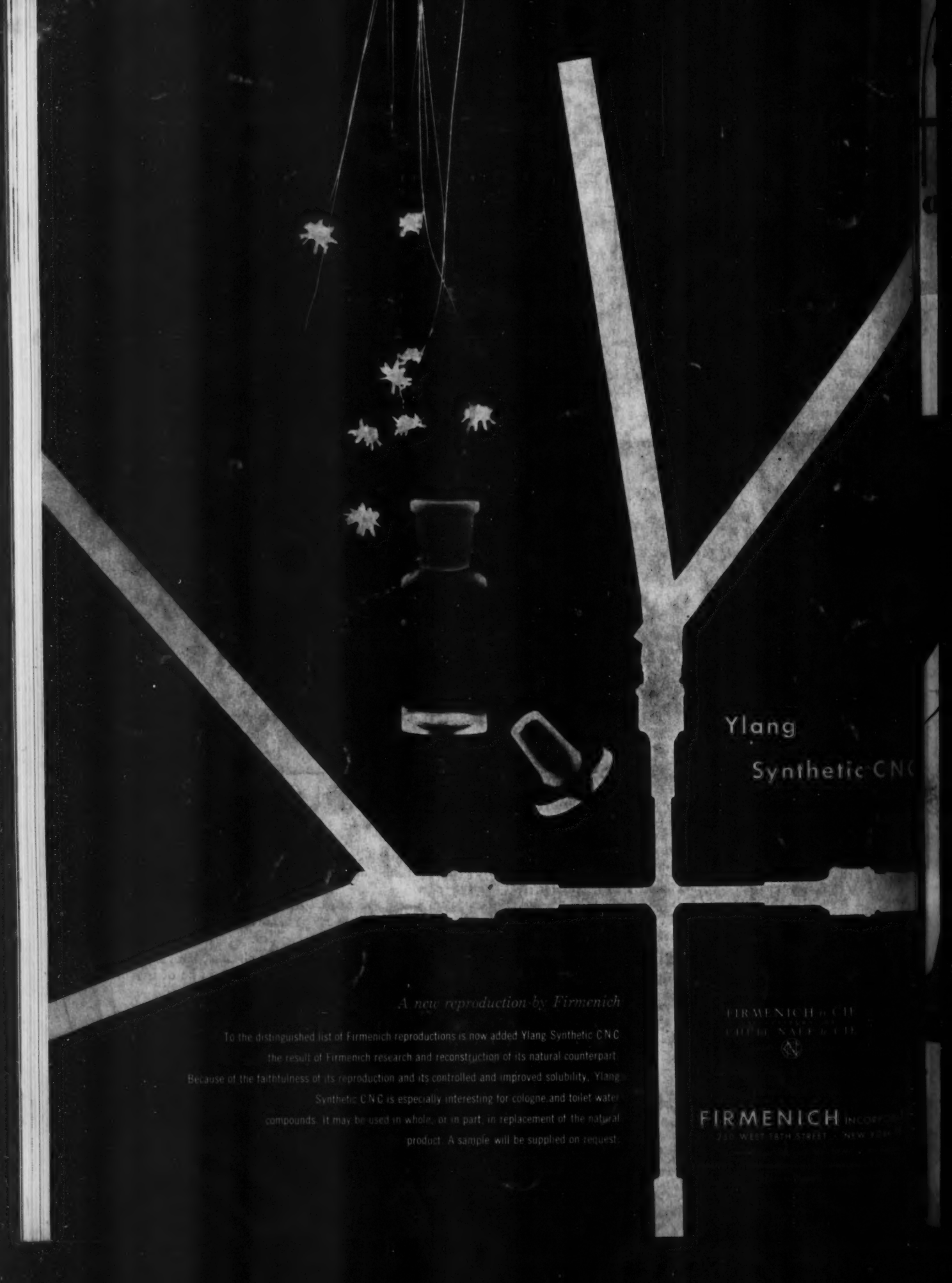

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